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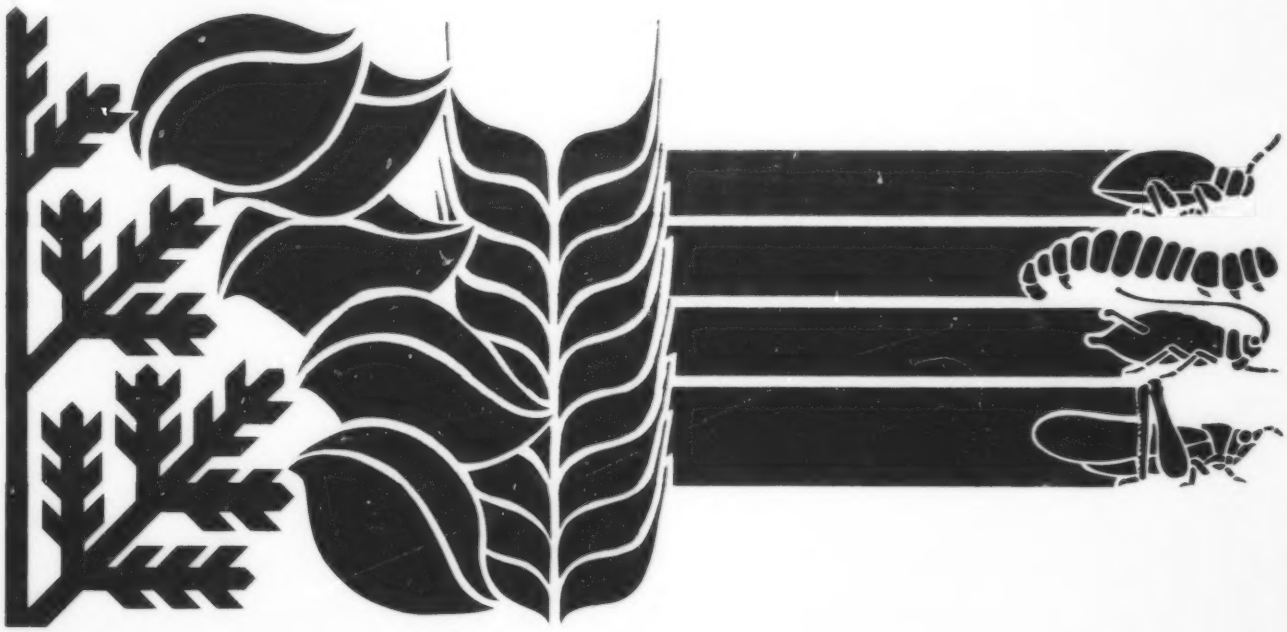
The Canadian agricultural insect pest review

Volume 69, 1991

La revue canadienne des insectes nuisibles aux cultures

Volume 69, 1991



Canada

The Canadian agricultural insect pest review

Volume 69, 1991

Compiled and edited by
MICHAEL J. SARAZIN
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Biological Resources Research
Ottawa, Ontario

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sur les terres et les
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93-01861/

This Review is published annually in the official language used by the recorder. The compiler is grateful to the provincial and federal cooperators, who make the publication possible. It is available free of charge to agriculturists and their establishments from

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Centre for Land and
Biological Resources Research
Research Branch
Agriculture Canada
Ottawa, Ontario
K1A 0C6

Produced by Research Program Service

©Minister of Supply and Services Canada 1992
Cat. No. A51-2/69-1991
ISBN 0-662-58952-1

La présente revue est publiée chaque année dans la langue officielle utilisée par le correspondant. Le compilateur remercie les coopérateurs provinciaux et fédéraux, qui alimentent cette revue. Celle-ci est disponible gratuitement aux agronomes et au personnel de leur établissement. Adresser la demande à

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Production du Service aux programmes de recherches

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ISBN 0-662-58952-1

CONTENTS/TABLE DES MATIERES

Contributors/Contributeurs....iv

Insect and Related Pests of Cereal Crops/
Les ravageurs des cultures céréalières....1

Insect and Related Pests of Corn/
Les ravageurs du maïs....10

Insect and Related Pests of Lawns, Forage Grasses and Legumes/
Les ravageurs des pelouses, des cultures fourragères et des légumineuses....11

Insect and Related Pests of Oilseed Crops/
Les ravageurs des cultures oléagineuses....15

Insect and Related Pests of Greenhouse Crops/
Les ravageurs des cultures en serre....16

Insect and Related Pests of Vegetable Crops/
Les ravageurs des légumes....17

Insect and Related Pests of Pome Fruits/
Les ravageurs des fruits à pépins....21

Insect and Related Pests of Stone Fruits/
Les ravageurs des fruits à noyaux....26

Insect and Related Pests of Small Fruits/
Les ravageurs de petits fruits....27

Insect and Related Pests of Miscellaneous Crops/
Les ravageurs de cultures diverses....29

Insect and Related Pests of Ornamentals/
Les ravageurs des cultures ornementales....30

Insect and Related Pests of Households/
Les ravageurs domestiques....37

Insect and Related Pests of Stored Products/
Les ravageurs des produits entreposés....42

Insect and Related Pests of Man and Animals/
Les ravageurs de l'homme et des animaux....45

Beneficial Insects/Insectes utiles....47

Index....48

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INSECT AND RELATED PESTS OF CEREAL CROPS
LES RAVAGEURS DES CULTURES CEREALIERES

New Brunswick/Nouveau-Brunswick

C.M. Maund

No infestations of the armyworm, *Pseudaletia unipuncta* (Haworth), were reported.

No infestations of the wheat midge, *Sitodiplosis mosellana* (Géhin), were reported.

Grain aphids were not a serious pest this season.

Manitoba

The 1992 Manitoba Grasshopper Forecast

Taken from *Manitoba Insect Report* no. 1, January, 1992.

The Manitoba grasshopper forecast (see map M-1) is based on an adult survey carried out by Manitoba Agriculture in the late summer of 1991. The areas surveyed are those where grasshoppers, over many years, have been a periodically recurring pest. This leaves large areas of the province unsurveyed where localized infestations may occur, particularly during dry periods and especially in overgrazed pastures.

The expected area of infestation is 9256 km^2, with 4430 km^2 light, 4824 km^2 moderate and 232 km^2 severe. This is an increase of about 1000 km^2 from 1991. Under normal conditions light infestations rarely require control. An expansion is anticipated in the west and southwest. In the Red River Valley, both west and east of the river, the outlook is for a smaller area of infestation than in 1991. An increase in the area affected is expected in central Manitoba.

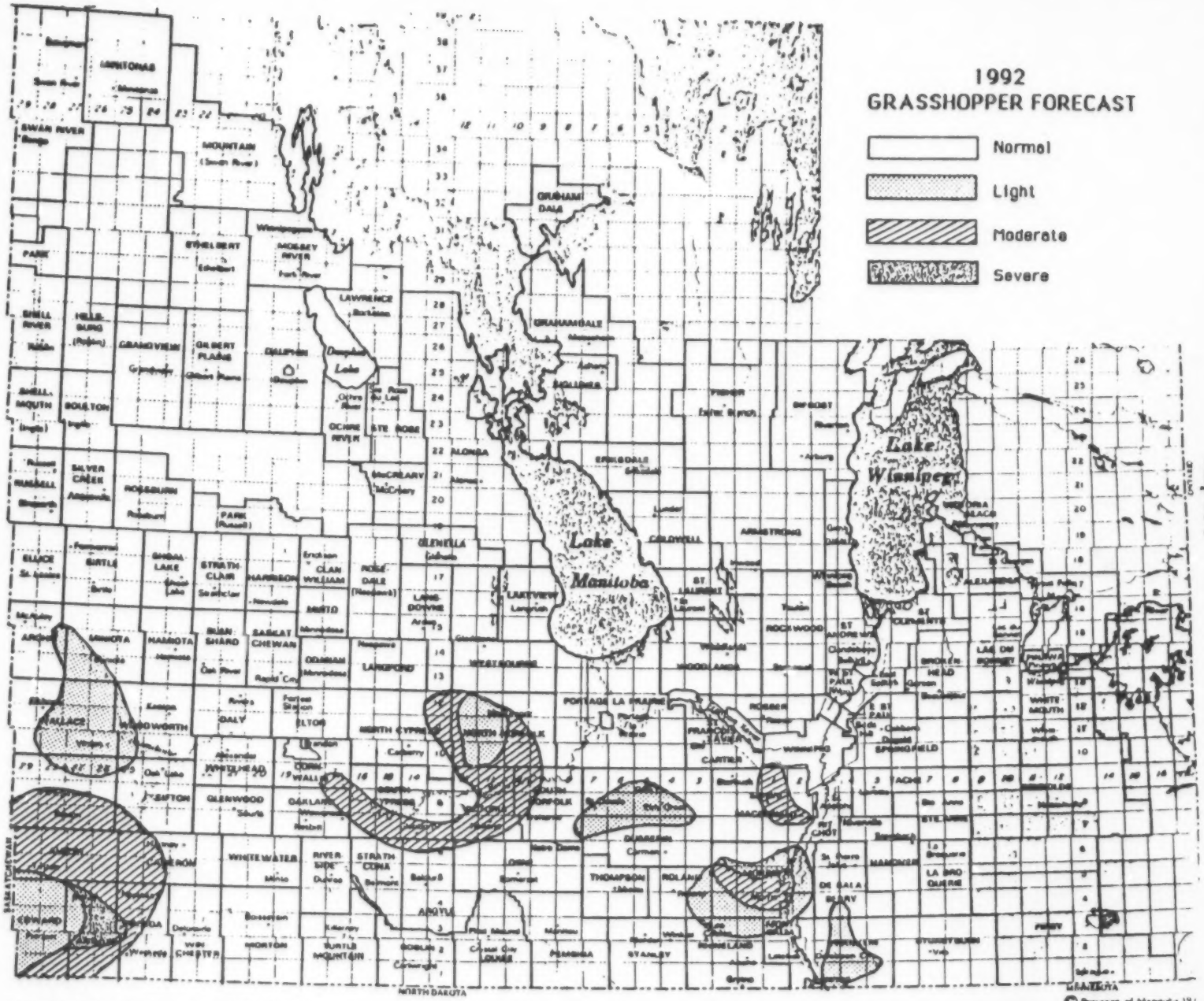
In western Manitoba, the greatest potential for damage will be from grasshoppers moving from pastures and hayland into adjacent crops. In the eastern half of the province, young hoppers moving from hatching areas along roadsides, ditches, fence lines and field margins will pose the greatest threat to crops.

Saskatchewan

L. Harris

Aphids (including the bird cherry-oat aphid, corn leaf aphid, English grain aphid, Russian wheat aphid), army cutworm, armyworm, grasshoppers, wheat midge, pale western cutworm, redbacked cutworm, rye jointworm, thrips, Hessian fly, wheat head armyworm, wheat stem maggot and wheat stem sawfly were reported feeding on cereals in 1991. Crop losses sustained from these insects are estimated to have been approximately $1,000,000.00 - 2,000,000.00 with insecticides being applied to control various cereal insects on approximately 200,000 - 300,000 hectares.

Aphids (general) were reported on late seeded cereals throughout the province. The dominant species was identified as the English grain aphid, *Macrosiphum avenae*. Moderate levels of the bird cherry-oat aphid, *Rhopalosiphum padi,* and the corn leaf aphid, *Rhopalosiphum maidis,* were also detected in southwestern Saskatchewan.


1992
GRASSHOPPER FORECAST
Normal
Light
Moderate
Severe
Lake Manitoba
Lake Winnipeg
Cartography by Surveys and Mapping Branch, Manitoba 1984
© Province of Manitoba 19

Map M-1

Grasshoppers were the most important insect pests of cereals in 1991 but caused much less damage to crops than had been expected. Grasshopper populations of economic importance were centered primarily between Leader and Kerrobert, in the west-central, between Assiniboia, Estevan and Watrous in central Saskatchewan and southeast of Carlyle in southeastern Saskatchewan.

Approximately 200,000 - 250,000 hectares were treated with insecticides to control grasshoppers in 1991. Grasshopper populations are expected to decline substantially in 1991.

The Hessian fly was reported causing damage to crops throughout the season. In most fields, the infestation was less than one per cent but in some fields near Carnduff, Esterhazy, Rhein, Riverhurst and Vanguard up to thirty per cent of the plants were reported to have lodged.

The lesser grain borer, *Rhyzopertha dominica,* was captured in a pheromone trap near Swift Current and Carlyle. Similar pheromone traps near Consul, Kindersley, Melfort, Moose Jaw, Outlook, Prince Albert, Quill Lake, Regina, Saskatoon, Shaunavon, Scott and Weyburn failed to indicate the presence of adult beetles.

The wheat midge, *Sitodiplosis mosellana*, was only a minor problem in 1991. Crop damage was light with less than 2000 hectares being sprayed with insecticides. In addition to the areas of northeastern and east central Saskatchewan that were known to be infested, wheat midge was detected for the first time near Meadow Lake.

Pale western cutworm, *Agrotis orthogonia*, and redbacked cutworm, *Euxoa ochrogaster,* populations remained relatively low in 1991. Approximately, 5000 hectares were treated to control these insects.

Russian wheat aphid, *Diuraphis noxia*, populations did not survive the winter of 1990 -1991 in southern Saskatchewan. Crops were monitored throughout the summer of 1991 for Russian wheat aphids migrating into Saskatchewan from Alberta, Montana or Idaho. However, it was not until August that Russian wheat aphids were located in south-western Saskatchewan.

The rye jointworm, *Harmolita secale*, was detected in rye fields at Leader, Liebenthal and Swift Current in late June after producers reported that some plants were lodging. The infestation was relatively light affecting less than ten per cent of the plants.

The wheat stem maggot, *Meromyza americana*, occurred throughout the province. Usually less than 3 percent of the crop was affected.

The wheat stem sawfly, *Cephus cinctus,* was abundant in southern and west-cental Saskatchewan. Farmers were able to reduce their losses by swathing the perimeter of fields in most situations. Infestation levels varied from as low as one or two per cent to as high as forty per cent.

Survey and Monitoring for the Russian Wheat Aphid in Saskatchewan in 1991

O.O. Olfert, J.F. Doane and L. Harris

The Russian wheat aphid has appeared again in Saskatchewan in 1991 and was first collected in a suction trap on August 19.

Collections from five suction traps (1 in the north at Saskatoon; 4 in the south at Indian Head, Swift Current, Shaunavon and Robsart) were examined on a weekly basis beginning in June, 1991. The number of cereal aphids caught in the traps peaked in early to mid-August. To date, specimens of the Russian wheat aphid have been collected only from the trap at Robsart.

Early scouting reports from the Robsart area also indicated that the Russian wheat aphid was present

on volunteer cereal plants together with a number of other aphid species. The population density of other cereal aphids declined with the cool fall weather, however, the Russian wheat aphid increased in number until freeze-up this winter.

A survey of fall-seeded crops was again initiated this fall in response to Russian wheat aphids arriving in the province in mid-August. The objective of the field survey was to determine the distribution of the Russian wheat aphid in Saskatchewan. By late September, the Russian wheat aphid was found infesting fall-seeded crops in 8 municipalities in the southwest region of the province (see map M-2). The fields were again sampled in November, however, only dead aphids were recovered from infested plants.

The project is a joint undertaking by federal and provincial governments and is being funded in part by the Agricultural Development Fund of the Saskatchewan Department of Agriculture.

The 1992 Saskatchewan Grasshopper Forecast

O.O. Olfert, R.M. Weiss and D.W. Giffen

The threat to crop production from grasshoppers is expected to be less in 1992 than it was in 1991. The majority of the province is forecast to have a light infestation of grasshoppers in 1992 with no area of very severe infestation. However, on a province-wide basis the average number of grasshoppers per square meter (Fig. 1) and the number of square kilometers infested (see map M-3) is expected to be similar to 1991 levels. Predictions are based on estimates of adult grasshopper density obtained from the annual survey, as well as weather and biotic factors that affect grasshoppers. The grasshopper forecast is supported jointly by Saskatchewan Agriculture and Food, Saskatchewan Rural Development, and Agriculture Canada.

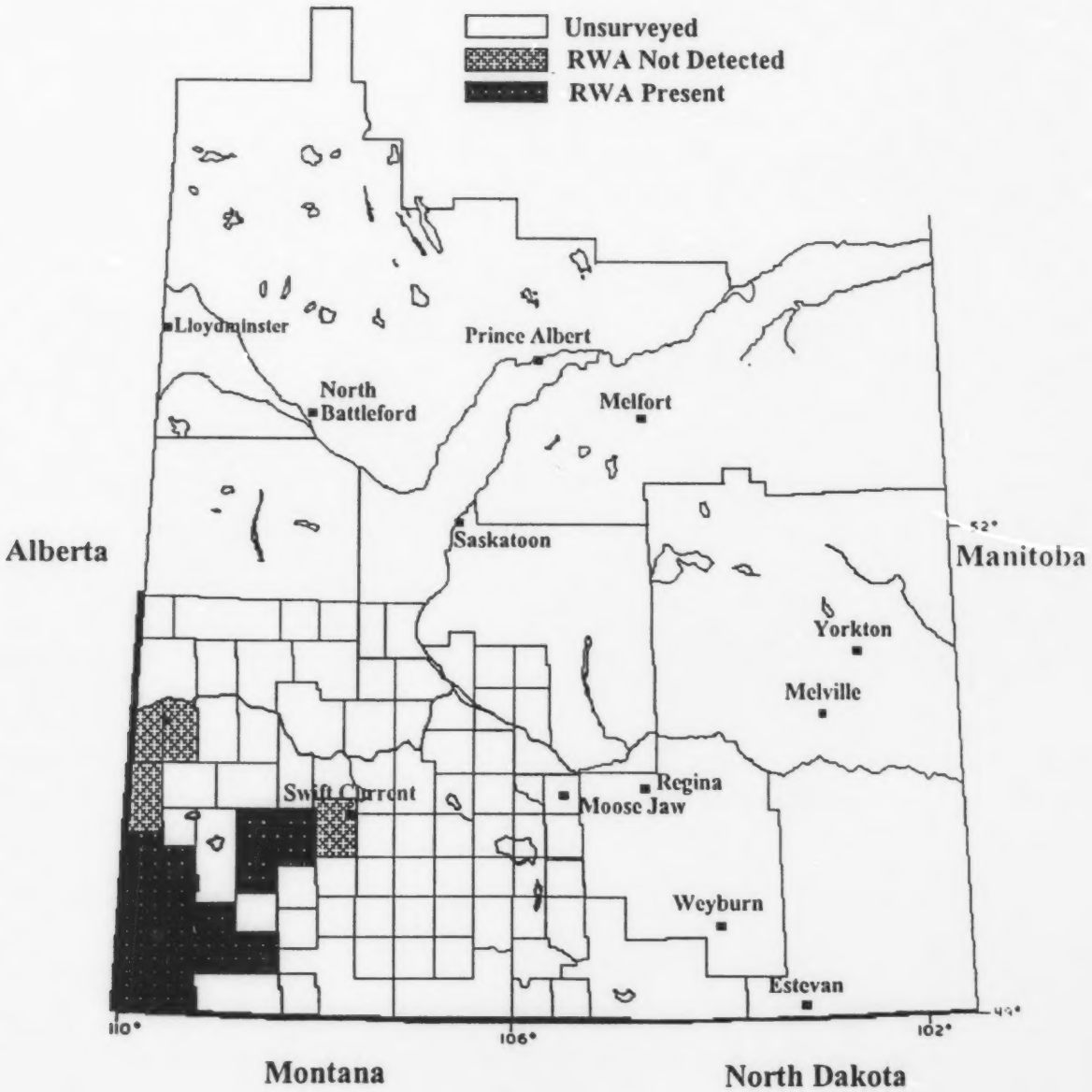
Very light infestations are predicted to decrease to 29 % (down from 44 % in 1991) of the survey area and light infestations are expected to increase to 53 % (up from 37 % in 1991). Moderate infestations are predicted to be 15 % and severe 3 %; no very severe infestations are expected. Severe infestations are expected to occur in the following areas: North Battleford, Langham, Elstow - Vonda regions, Raymore, west of Moose Jaw, and the Mossbank - Assiniboia regions.

The dominant species is the migratory grasshopper, *Melanoplus sanguinipes*, followed by the twostriped grasshopper, *Melanoplus bivittatus*, the clearwinged grasshopper, *Camnula pellucida*, and the Packard's grasshopper, *Melanoplus packardii*.

The severity of grasshopper infestations depends primarily on weather. A warm, dry fall, enhances egg laying and egg development; a warm, dry spring and early summer increases nymphal survival and potential for subsequent damage to crops. Field margins, fence lines, roadsides and crops grown on stubble must be watched closely when hatching begins in the spring. Updates of the current status of grasshopper populations will be available in the spring as the 1992 crop growing season unfolds.

Map M-2

RUSSIAN WHEAT APHID SURVEY
1991



Map M-3

Saskatchewan Grasshopper Forecast - 1992

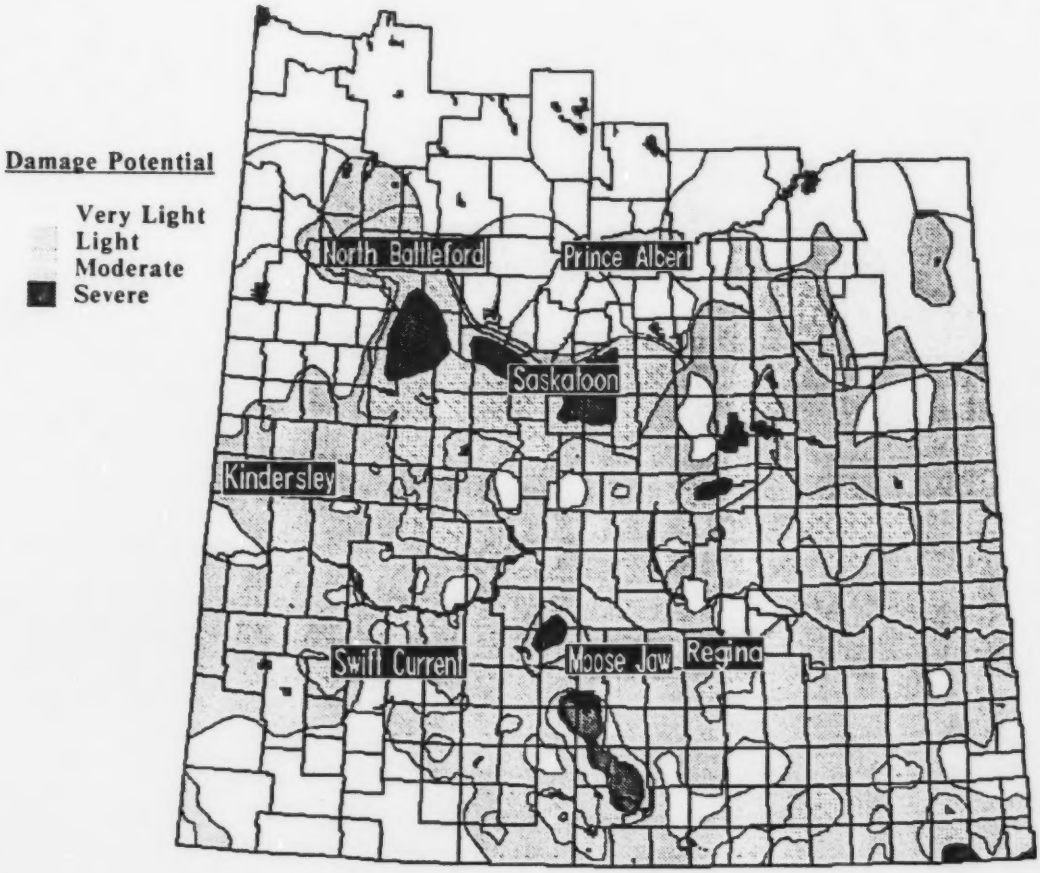
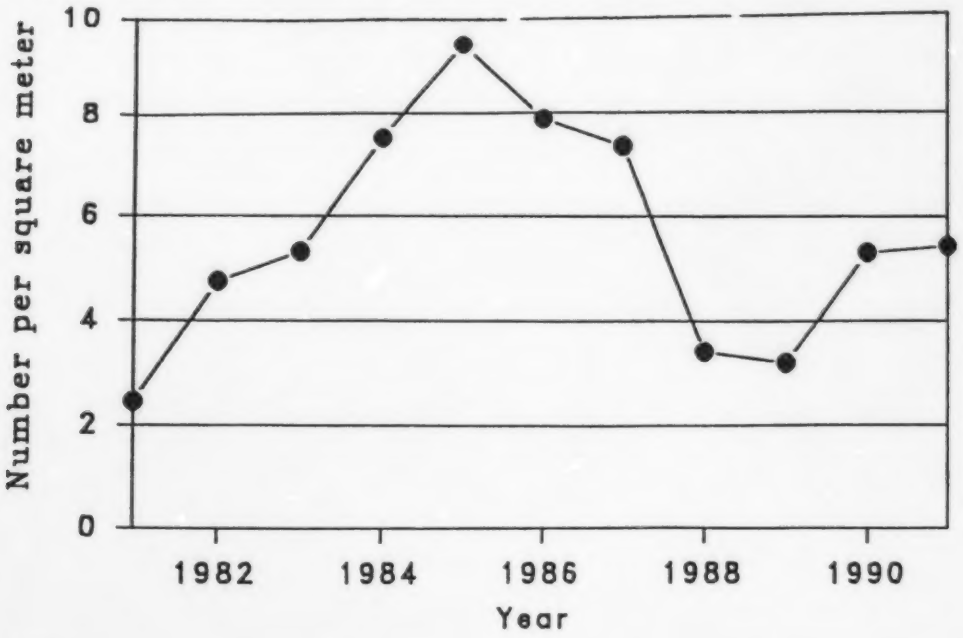


Figure 1. The average number of grasshoppers per square meter in Saskatchewan from 1981 to 1991.



Alberta

The 1992 Alberta Grasshopper Forecast

D. Johnson, C. Andrews and M. Dolinski

Grasshoppers continue to be a serious crop pest in Alberta, and their numbers are increasing in some regions.

The 1991 grasshopper forecast, released in 1990, indicated a possible expansion of the infestation in east-central Alberta, with additional hot spots expected in some southwestern counties. Significant numbers of grasshoppers hatched in all these areas and spraying was widespread, reaching a total of 60,000 ha. Above-normal precipitation in June reduced the severity of the infestations across much of the agricultural land in Alberta, but did not change the overall pattern of infestation. Recovery of grasshopper populations after the wet period resulted in maintenance of the moderate infestation that has been present since the decline of the major outbreak of 1985-86.

Some new hot spots appeared west and north of Edmonton (for example, north of Westlock) and in other areas that experienced hot and dry weather in July and August. The breeding populations in these areas may cause localized problems in June, 1992. The potential for crop damage could be reduced by spring moisture. Careful monitoring and treatment of sandy grassland areas near crops will be necessary to curb losses.

The severe infestations forecast for some fields and rangeland in the area northwest of Provost and near Oyen decline, while infestations near Acadia Valley and Oyen remained severe. Smaller scattered populations were able to breed in the good weather in July and August, and sufficient heat was accumulated for successful hatching in late May of 1992.

As was the case last year, the total area rated as severely infested has not increased greatly in Alberta (Table 1; see map M-4). The combined area that is expected to be moderately to very severely infested area has increased. The small increase in the average grasshopper count indicates that the problem will not disappear, and could increase if conditions remain favorable to grasshoppers.

The 1992 grasshopper forecast is based on survey data collected in late July and early August, 1991, by Agriculture Service Board Fieldmen from 52 counties, municipal districts, and improvement districts. This year's survey included 1,777 sites in Alberta. The grasshopper forecast is used to direct control and research.

Table 1. Land area by infestation category, based on grasshopper breeding density. Regions rated moderate and higher will require control measures on significant numbers of farms.

Risk Rating	1990 forecast Map Area %	1991 forecast Map Area %	1992 forecast Map Area %
Very Light	40	42	35
Light	41	25	30
Moderate	11	25	25
Severe	6	7	9
Very Severe	2	1	1
Total sq. km	187,000	200,600	212,300

(Note: Do not spray grasshoppers unless there are more than 10 per square meter and crop damage is visible. Use registered pesticides at rates recommended on the label. Treating concentrated groups of young grasshoppers saves insecticide.)

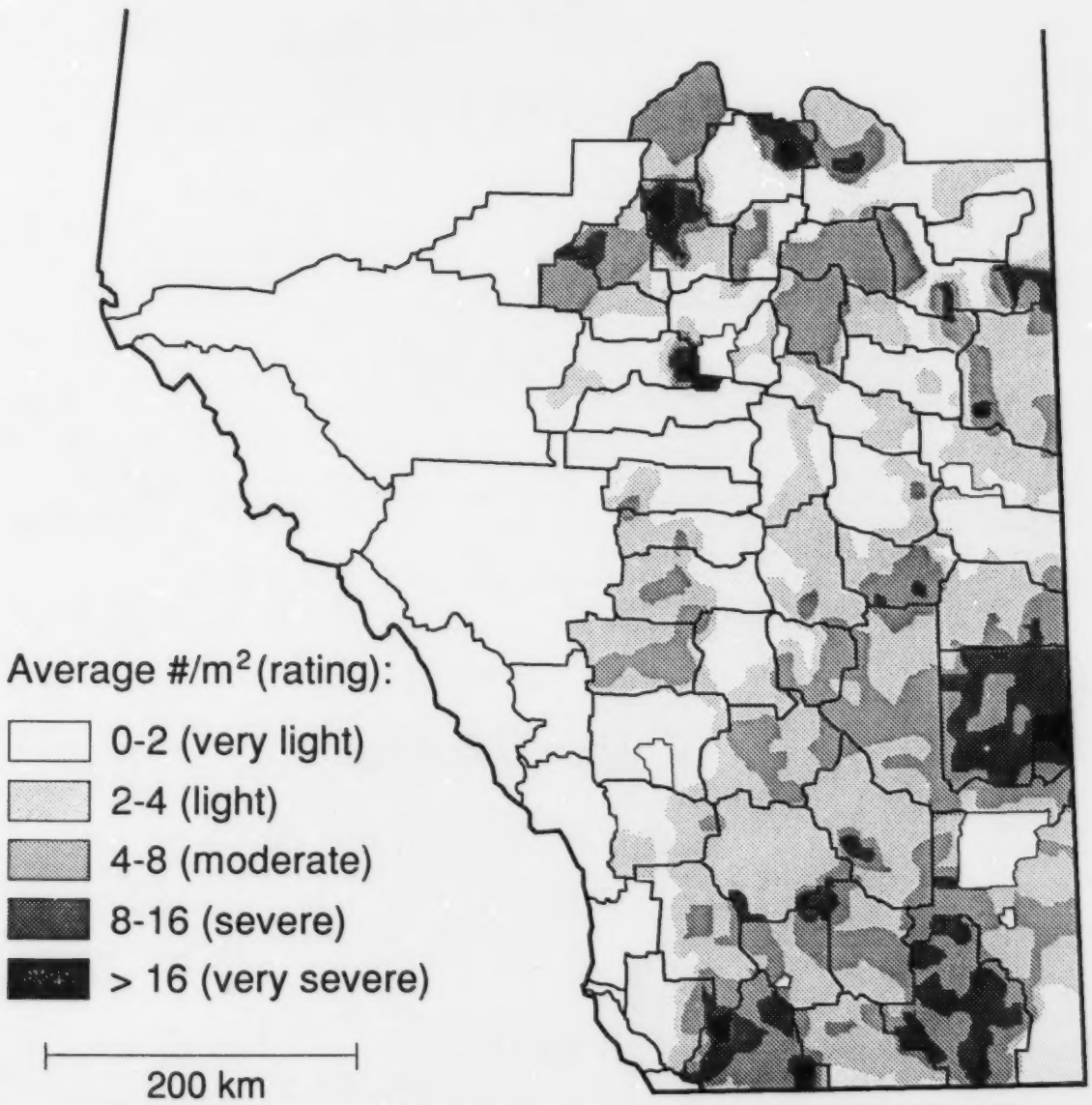
Table 2. Average grasshopper count (number per square metre) observed in the annual surveys. These figures indicate the average densities of adult grasshoppers observed along roadsides and field margins during breeding season.

year	n	average	year	n	average
1970	356	2.11	1981	1,139	1.79
1971	380	3.94	1982	1,367	2.32
1972	390	5.34	1983	1,398	3.44
1973	645	5.43	1984	1,784	4.89
1974	761	5.89	1985	1,972	7.18
1975	1,112	7.05	1986	1,763	5.99
1976	879	2.63	1987	1,609	4.26
1977	1,065	1.86	1988	1,565	3.81
1978	1,018	1.40	1989	1,656	4.85
1979	1,247	1.38	1990	1,776	3.69
1980	924	2.09	1991	1,777	4.09

Because the average is reduced by the predominance of low counts in uninfested areas late in the summer, a provincial average of more than about 3.5 usually indicates significant infestations. The number of sites (n) surveyed by the Agriculture Service Board Fieldmen is shown for each year.

Map M-4

Alberta Grasshopper Forecast - 1992



INSECT AND RELATED PESTS OF CORN
LES RAVAGEURS DU MAIS

New Brunswick/Nouveau-Brunswick

C.M. Maund

Moderate infestations of the European corn borer, *Ostrinia nubilalis* (Hubner), were reported on fodder corn.

Moderate infestations of the corn earworm, *Heliothis zea* (Boddie), were reported.

Québec

C. Ritchot, G. Boivin et J. Boisclair

Seule la race univoltine de la pyrale du maïs, *Ostrinia nubilalis* (Hubner), s'attaque au maïs-grain au Québec. Les premiers papillons de cette race sont apparus dans les pièges à phéromone sexuelle le 18 juin dans le sud-ouest du Québec. Ils sont demeurés en vol jusqu'au 26 juillet. Les chrysalides de cet insecte, observées dans les chaumes de maïs de la région de Saint-Hyacinthe, ont débuté leur éclosion le 20 juin et, le 11 juillet, elles étaient toutes écloses. La ponte, suivie à la ferme du Service de phytotechnie de Saint-Hyacinthe, a débuté le 9 juillet et fut très faible avec un total de 2 masses d'oeufs par 200 plants.

Ontario

K.E. Romel and M.D. Dykstra

Specimens of the western corn rootworm, *Diabrotica virgifera virgifera* LeConte, from Douglas, Ontario, were submitted for a confirmation of identification.

INSECT AND RELATED PESTS OF LAWNS, FORAGE GRASSES & LEGUMES
LES RAVAGEURS DES PELOUSES, DES CULTURES FOURRAGERES ET DES LEGUMINEUSES

Nova Scotia/Nouvelle-Ecosse

L. Crozier

The most serious pest of lawns this past summer was the chinch bug, *Blissus leucopterus* (Say). The weather was very warm and dry throughout May and June. Also, large populations of adults were present in May. The main infestations occurred during July and August. This appeared to be somewhat later than normal. There may have been a delay in development due to the extreme dry conditions, or perhaps the damage to lawns was masked by the dry conditions. All parts of the province had outbreaks of this insect. Large numbers of chinch bugs were reported crawling on the outside walls of houses and on driveways. The total amount of damage caused by this pest must have been very substantial this year.

The European crane fly, *Tipula paludosa* Meigan, was reported from several locations.

The armyworm, *Pseudaletia unipuncta* (Haworth), was reported from a few lawns in the Halifax region. These occurred early in May and were apparently overwintering larvae.

Québec

C. Ritchot

Les chenilles de la belle-dame, *Vanessa cardui*, (painted lady), ont défolié des champs de lupin jusqu'à 50 % dans le sud-ouest du Québec pendant les deux premières semaines de juin. Cet insecte a aussi été rapporté sur cette culture dans la région de Trois-Rivières au cours de la même période.

Ontario

K.L. Nystrom & P.D. Syme

Twenty-one concerns about the hairy chinch bug, *Blissus leucopterus hirtus* Montandon, in the Sault Ste. Marie area in 1991, dominated the calls in this category. Two calls each concerning unidentified ants and white grubs, *Phyllophaga* sp., found in the soil were reported. One of the calls about white grubs was from Searchmount where the grubs were infected with a *Cordyceps* fungus. It was brought in out of curiosity. The black army cutworm, *Actebia fennica* (Tausch.), was reported twice feeding on newly planted lawns in the Algoma District. One call each was received concerning planthoppers, (Cicadellidae), the soybean looper, *Pseudoplusia includens* (Walker), and unidentified aphids all found feeding on beans.

K.E. Romel & M.D. Dykstra

Lawns

The hairy chinch bug, *Blissus leucopterus hirtus* Montandon, was the most common insect pest of turf submitted for identification (9). Five samples of white grubs were submitted, four of which were identified as European chafers, *Rhizotrogus majalis* (Razoumowsky). Bluegrass billbugs, *Sphenophorus parvulus* Gyllenhal (2), turfgrass scale, *Lecanopsis formicarum* Newstead (3), and sod webworms, subfamily Crambinae (2), were also submitted. Three specimens of the great golden digger wasp, *Sphex ichneumoneus* (L.), were collected from ground nests in home lawns. Non-pest species identified from turf samples included rove beetles, millipedes, flea beetles, ground beetles and darkling beetles.

Crane flies, suspected to be *Tipula trivitata*, were collected from a lawn on May 13 in Mississauga, Ontario.

Dark-winged fungus gnats (Sciaridae) were reported to be in large numbers in circular patches on a lawn in Peterborough, Ontario, on Oct. 17. The turf had been damaged by necrotic ringspot and the flies were likely feeding on the fungus on the damaged grass.

Telephone enquiries were received regarding the following pests, in order of decreasing frequency:

White grubs, Scarabaeidae (82)
Hairy chinch bug (15)
European chafer adults (14)
Mermithoid nematodes, *Mermis subnigrescens* (10)
Sod webworm (3)
Great golden digger wasp (2)
Turfgrass scale (2)
Horsehair worms, Nematomorpha (1)

The cicada killer wasp, *Sphecius speciosus* (Drury), was reported to be making numerous nests in a playground in Chatham, Ontario, in mid-July.

Alfalfa

Tarnished plant bugs, *Lygus lineolaris* (Palisot de Beauvois), were submitted from Shakespeare, Ontario, on July 19. They were reported to be feeding on alfalfa.

A. Pucat

June beetles, *Phyllophaga* sp., from Ottawa were identified in late May and early June. Wireworms from lawns were identified in June. In July and August hairy chinch bugs, *Blissus leucopterus hirtus* Montandon, were identified. An inquiry about clover mites on window sills and exterior house walls next to a lawn was answered in April.

Saskatchewan

New Saskatchewan Record of Sweetclover Casebearer

J.J. Soroka and J.-F. Landry

The sweetclover casebearer, *Coleophora trifolii* (Lepidoptera: Coleophoridae), was first recorded in North America in 1966, when it was collected near Pembroke, Ontario, and on an island in the St. Lawrence River (Pilley and Trieselmann 1967). Since then it has been collected in Nova Scotia, Quebec, other locations in Ontario, in Manitoba, and Alberta, as well as in several eastern states. In 1991 it was collected from a sweetclover plot at the Agriculture Canada Saskatoon Research Station farm at Saskatoon, the first Saskatchewan record.

Numerous specimens of this insect were collected by J.-F. Landry near Edmonton, Alberta, in 1984 and 1985. Since *C. trifolii* was discovered in Manitoba only a few years ago (Man. Agriculture 1990), the distributional gap may be indicative of a paucity of collecting in Saskatchewan.

The larvae of the sweetclover casebearer feed exclusively on sweetclover seeds (Landry 1991) in the late summer. They overwinter in their cases on the ground. Pupation occurs within the case in the spring

and the moths emerge at the onset of bloom. Females lay eggs in the calices of sweetclover flowers and young larvae feed on the developing ovules. Fourth and older instar larvae feed on the seeds and construct cases, first by cementing two to four immature seed pods, then by using whole mature seed pods. Damaged seed pods turn brown and shrivel, remaining loosely attached to the seed head by silk spun by the larva. Cases eventually fall to the ground.

Little is published of the pest status of *C. trifolii* in Canada. Loan (1970) reported destruction of approximately 80 % of the seed pods in a 7 acre stand of sweetclover near Foxboro, Ontario. Samples of sweetclover from the Dugald area of central Manitoba were heavily infested with sweetclover casebearer in 1990.

The Saskatchewan specimens were collected from an experimental plot of five cultivars of sweetclover, Yukon, Norgold, Arctic, Alpha and Polara, each 6.1 x 1.7 m in size and each randomly replicated five times. Infestations were very light, averaging 0.6 casebearers/m row of plants in the first four cultivars and 1.8 casebearers/m row of Polara plants, respectively. Although there was little discernible seed loss attributable to the casebearer at this location, the rapidity of the spread and population growth of this insect warrants diligence in monitoring for its presence.

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L. Harris

Insect damage to forages and pulse crops was only minor in 1991. Approximately, 10,000 hectares of seed alfalfa were treated to control lygus and alfalfa plant bugs.

The "range wooly-bear", *Grammia blakei,* was abundant on rangeland near Piapot and Leader. The caterpillars were numerous enough that they prevented the pasture from "greening-up" for about three weeks and caused some damage along the edge of fall rye adjacent to grasslands.

The major insect pests affecting turf grasses in Saskatchewan in 1991 were:

Bronze cutworm	*Nephelodes emmedonia*
Glassy cutworm	*Crymodes devastator*
Sod webworm	Crambinae spp.
White grub	Scarabaeidae sp.
--	*Aphodius pinguillus*

Alberta

Infestation of *Blissus canadensis* Leonard in Southern Alberta

B.D. Schaber & M. Dolinski

In 1991, an Hemipteran, *Blissus canadensis* Leonard, destroyed almost all of the crested wheat grass in a 50 ha hay field of mixed alfalfa, sainfoin and brome in southern Alberta near Del Bonita. High populations of nymphs were noticed in great numbers in June, with a resurgence of high nymph populations during September. Adults were present in July and August. Preliminary results of a survey conducted in early October shows that this pest has emigrated to fields up to 2 km away. Insecticide trials are scheduled to be carried out next spring should this pest insect survive the winter.

Silver-top in Kentucky Blue Grass

B.D. Schaber

A 60 ha field of Kentucky blue grass was drastically hit with the condition known as "silver-top" in early July. Sampling for insects revealed the presence of several species of grass bugs, but none in sufficient numbers to cause the entire field to appear "white". Mites are strongly suspected as the causal organism. The sanitation method of burning had not been carried out the previous fall and this combined with the cool damp weather during the month of June contributed to a dramatic build-up of mite populations, however, by late July few mites could be found in the sheath surrounding the last node. The grass seed producers return was approximately 25 % of expected harvest. Three weeks after harvest (1991) the field was burned.

INSECT AND RELATED PESTS OF OILSEED CROPS
LES RAVAGEURS DES CULTURES OLEAGINEUSES

Québec

C. Ritchot

La deuxième génération de chenilles de la belle-dame, *Vanessa cardui*, (painted lady), s'est manifestée dans les cultures de soya de la fin juillet au début août dans les régions de Saint-Hyacinthe, de Châteauguay et de Nicolet. Cette même génération s'est aussi attaquée à un champ de tournesol de la région de Granby.

Saskatchewan

L. Harris

Flea beetles were the only insect that was reported to have caused enough damage to canola and mustard fields to warrant treatment with insecticide. Approximately 8,000 hectares of canola were sprayed with insecticides to protect the crop from these insects.

The crucifer flea beetle, *Phyllotreta cruciferae*, was abundant in the spring with foliar insecticides being used throughout the province to prevent damage to emerging canola.

The red sunflower seed weevil, *Smicronyx fulvus*, was reported in southern Saskatchewan in 1991. Less than 200 hectares were treated with insecticide to control them on oilseed sunflower.

The painted lady butterfly, *Vanessa cardui*, migrated into Saskatchewan and was abundant throughout the province in 1991. Damage to sunflowers and borage crops were limited.

INSECT AND RELATED PESTS OF GREENHOUSE CROPS
LES RAVAGEURS DES CULTURES EN SERRE

Ontario

K.L. Nystrom & P.D. Syme

Leafhoppers (Cicadellidae) were found twice in a greenhouse situation in the Sault Ste. Marie area and also from Kemptville on phlox. As well, whiteflies (Aleyrodidae) on fuschia, blister beetles (Meloidae) on delphiniums, an unidentified cutworm (Noctuidae) and the black vine weevil, *Otiorhynchus sulcatus* (Fab.), were reported once each, damaging greenhouse crops.

K.E. Romel & M.D. Dykstra

Springtails, family Hypogastruridae, were submitted from a clematis greenhouse in Goodwood, Ontario. Springtails, family unidentified, were submitted from a tomato greenhouse in Cambridge, Ontario.

The tomato russet mite, *Aculops lycopersici* (Massee), was identified from tomato samples from Tiverton, Ancaster and Brampton in Ontario.

Cuban laurel thrips, *Gynaikothrips ficorum* (Marchal), were found infesting *Ficus retusa* in Brampton, Ontario.

Shore flies (Ephydridae) were found infesting rock wool in a greenhouse in Tiverton, Ontario.

INSECT AND RELATED PESTS OF VEGETABLE CROPS
LES RAVAGEURS DES LEGUMES

Nova Scotia/Nouvelle-Ecosse

L. Crozier

Diamondback moth, *Plutella xylostella* (L.), populations remained relatively low throughout the growing season.

Imported cabbageworm, *Artogeia rapae* (L.), numbers remained low for the second consecutive year.

The cabbage looper, *Trichoplusia ni* (Hubner), was not abundant until mid-August.

Painted lady larvae, *Vanessa cardui* (L.), caused damage to one field of broccoli. This insect was particularly abundant this year.

Tarnished plant bugs, *Lygus lineolaris* (Palisot de Beauvois), caused damage to lettuce and cauliflower. The damage to the lettuce occurred at harvest, hence control measures could not be applied.

Onion thrips, *Thrips tabaci* Lindeman, were abundant in onions and leeks throughout most of the summer.

The corn earworm, *Heliothis zea* Boddie, peaked in mid-August. Invasions of adult moths remained low throughout the remainder of the season.

The fall armyworm, *Spodoptera frugiperda* (J.E. Smith), did not occur until late in the season.

Slugs, probably *Deroceras reticulatum* (Muller), caused minor damage to Brussels sprouts.

The redbacked cutworm, *Euxoa ochrogaster* (Guenee), caused moderate damage to a carrot field. The field had a hay crop on it the previous year.

Québec

C. Ritchot, G. Boivin et J. Boisclair

Carotte et Céleri

Les populations du charançon de la carotte, *Listronotus oregonensis* (Le Conte), furent d'une intensité normale en 1991, dans le sud-ouest du Québec, avec un maximum de captures de 37.0 adultes hivernants par piège à plaques. Les dégâts cependant ont été importants, avex 57.67 % de carottes attaquées dans les parcelles témoins à Ste-Clotilde. Au début de juillet les larves du charançon de la carotte étaient présentes sur les racines de 10 % des plants d'un champ de céleri. Le 11 juillet, on trouvait encore des oeufs de cet insecte chez des producteurs de carottes. Nous ne savons pas encore s'il peut développer une deuxième génération au Québec. Ce charançon est maintenant présent dans les carottes de terres minérales dans la région agricole de l'Assomption, au nord de Montréal.

Les captures des adultes de la mouche de la carotte, *Psila rosae*, furent beaucoup plus importantes que la normale en début de saison, avec 8.6 spécimens par piège par jour à Ste-Clotilde. Cependant, on n'a pas observé de dégâts importants chez les producteurs par les larves de la première génération. Les captures des mouches de la deuxième génération ont beaucoup diminué, avec des captures de 2.4 mouches par piège par jour. Cette forte baisse chez cette génération fut sans doute responsable du faible taux de carottes endommagées en fin de saison lors de l'arrachage et en entrepôt.

Maïs sucré

Les premiers papillons de la pyrale du maïs univoltine, *Ostrinia nubilalis* (Hubner), sont apparus le 18 juin dans les pièges à phéromones dans le sud-ouest du Québec. La ponte a débuté le 9 juillet dans cette région et le 12 juillet sur l'Ile d'Orléans. La ponte a été très faible à Saint-Hyacinthe avec un total de 2 masses d'oeufs par 200 plants, alors qu'elle atteignit à l'Ile d'Orléans, un maximum de 8 masses d'oeufs par 100 plants. Cette race de la pyrale du maïs n'a causé aucun dégât sérieux chez les producteurs qui ont appliqué leurs traitements aux dates recommandées dans les Avertissements phytosanitaires du Québec.

Chez la race bivoltine de la pyrale du maïs, les premiers papillons de la génération hivernante ont été observés le 31 mai dans les pièges à phéromones du sud-ouest du Québec. On n'a pu trouver d'oeufs de cette race dans nos champs d'observation à St-Rémi ou à St-Hyacinthe; cependant, des jeunes larves étaient visibles sur le maïs très hâtif à partir du 25 juin. On observa toutefois la présence de masses d'oeufs sur ce type de maïs à la fin de juin dans la région de Québec. Dans cette région et sur l'Ile d'Orléans, plusieurs champs de maïs très hâtif étaient infestés par cet insecte en début de juillet. Plusieurs producteurs ont subi des pertes, ne s'attendant pas à une telle situation.

Les premiers papillons de la première génération de la pyrale du maïs bivoltine, qui produisit la deuxième génération de larves, sont apparus dans les pièges à phéromone sexuelle le 15 juillet dans le sud-ouest de la Province. La ponte y a débuté le 26 juillet et se poursuivait encore le 3 septembre à St-Hyacinthe, quand on cessa le dépistage des oeufs. Seul le maïs sucré tardif était menacé par cette race. Avec l'aide des Avertissements phytosanitaires, les producteurs ont réussi à tenir en échec cette deuxième génération de la pyrale du maïs bivoltine.

Le ver de l'épi, *Heliothis zea* (Boddie), s'est manifesté dans les régions du sud-ouest du Québec et de Québec chez le maïs sucré tardif. La légionnaire d'automne, *Spodoptera frugiperda* (J.E. Smith), a été rapportée dans le sud-ouest de la Province. Les chenilles de ces deux insectes étaient suffisamment développées pour être bien visibles dans les épis à partir de la mi-septembre. Les producteurs affectés par ces insectes ont dû abandonner leurs champs. Ce sont des insectes impossibles à tenir en échec lorsqu'ils s'attaquent directement aux épis en fin de saison.

Crucifères

La mouche du chou, *Delia radicum* (L.), débuta sa ponte le 12 mai dans le sud-ouest du Québec et le 16 mai dans la région de Québec. Partout, cette première ponte fut intense et plus particulièrement dans la région de Québec. La culture la plus affectée fut celle du chou-fleur, où la présence d'une ou quelques larves au niveau du collet entraînait la mort des jeunes transplants.

Les premiers papillons de la piéride du chou, *Artogeia rapae* (L.), étaient en vol le 23 mai et avaient débuté leur ponte sur les jeunes transplants de choux autant dans le sud-ouest du Québec que dans la région de Québec. La ponte demeura plutôt faible en début de saison, pour s'intensifier en juillet. Cet insecte n'a cependant pas causé de problèmes majeurs cette année.

Bien que présentes dans les cultures de crucifères de la Province depuis le début de la saison, les populations de la fausse-teigne des crucifères, *Plutella xylostella* (L.), n'ont pas été menaçantes avant le mois de juillet. Vers la mi-juillet, à l'ILe d'Orléans, cet insecte commença à préoccuper particulièrement les producteurs de choux de Bruxelles. Les chenilles résistaient à plusieurs traitements recommandés. Dans la localité des Deux-Montagnes, ce problème se présenta de façon aiguë au cours du mois d'août.

Les vers gris se sont manifestés en début de juillet à l'ILe d'Orléans, où ils ont détruit des champs de choux-fleurs et de rutabagas jusqu'à 20 %.

Dans les premières semaines de juin, sur l'Ile d'Orléans, la mouche des légumineuses, *Delia platura* (Meigen), a causé des dégâts à des champs de haricots et de concombres de l'Ile d'Orléans.

Les vers blancs, ou larves du hanneton commun, *Phyllophaga anxia* (Lec.), ont causé des dommages

aux cultures de rutabagas dans la région de L'Assomption.

Ontario

K.L. Nystrom & P.D. Syme

The onion maggot, *Delia antigua* (Meigen), was the only insect reported in this category.

G. McLeod

Above average temperatures early in the season resulted in early emergence of the European corn borer, *Ostrinia nubilalis* (Hubner), and allowed for a significant second generation in the usual 1 generation per year area around London and a third generation in the usual two generation area south of London to Harrow. This is the third year in the last 5 (1987 - 1991) where this has been the case and signals the increasing likelihood of damage from corn borer in sweet corn and pepper late in the season.

Weather conditions were ideal for cabbage maggot, *Delia radicum* (L.), development in the London - Exeter area and three generations were completed by the end of September. Rutabaga for late harvest was under heavy cabbage maggot pressure during October and November but significant rutabaga damage was not a problem and rutabaga went into storage in excellent condition.

K.E. Romel & M.D. Dykstra

The sunflower maggot, *Strauzia longipennis* (Wiedemann), was identified on samples of Jerusalem artichoke from Mississauga and Clifford, Ontario.

Seed maggots, *Delia sp.*, were found in wax bean plants from Noelville, Ontario.

Frit flies, family Chloropidae, were found in large numbers on tomato plants in a field in Chatham, Ontario, on June 18.

Larvae from the moth family Arctiidae (species unidentified) caused considerable feeding injury to the leaves of onions in a field in Drumbo, Ontario, at the end of June.

Telephone enquiries were received regarding the Colorado potato beetle, *Leptinotarsa decemlineata* (Say) (5), slugs (4), and the tomato hornworm, *Manduca quinquemaculata* (Haworth) (2).

A. Pucat

At the end of May, inquiries about cutworms damaging young tomato plants were received. In June, damage caused by earwigs, *Forficula auricularia*, to young vegetable plants such as parsley, carrots and cabbage was reported. Earwigs damaged corn cobs in late July.

Saskatchewan

L. Harris

Numerous inquiries were received this year about various insects on garden fruits and vegetables. The common insects in 1991 were:

Bumble flower beetle	*Euphoria inda*
Celeryworm	*Papilio polyxenes asterius*
Colorado potato beetle	*Leptinotarsa decemlineata*
Corn earworm	*Heliothis zea*
Crane fly	Tipulidae spp.
Crucifer flea beetle	*Phyllotreta cruciferae*
European corn borer	*Ostrinia nubilalis*
Imported cabbageworm	*Pieris rapae*
Millipedes	
White grub	Scarabacidae spp.
Wireworms	

INSECT AND RELATED PESTS OF POME FRUITS
LES RAVAGEURS DES FRUITS A PEPINS

New Brunswick/Nouveau-Brunswick

C.M. Maund

Infestations of green apple aphids, *Aphis pomi* DeGeer, were fairly heavy necessitating specific control sprays.

A moderate infestation of rosy apple aphid, *Dysaphis plantaginea* (Pass.), occurred in one orchard and a very light infestation occurred in another orchard in the same region. The aphid is generally not a problem in apple orchards in the province, although it may be spreading.

Spotted tentiform leafminer, *Phyllonorycter blancardella* (Fab.), infestations were generally light, and parasitism was high in many orchards.

A slight increase in populations of the apple maggot, *Rhagoletis pomonella* Walsh, was noted in a few orchards, most likely due to the extra long emergence period for adult flies this season.

The twospotted spider mite, *Tetranychus urticae* Koch, and the European red mite, *Panonychus ulmi* (Koch), continued to be pests in most orchards.

Moderate injury was caused to fruit in several orchards by the plum curculio, *Conotrachelus nenuphar* (Herbst). July drop was particularly heavy in some orchards because of increased migration into orchards during the warm, dry spring and early summer.

Québec

Les ravageurs des vergers de pommiers du Québec en 1991

M. Roy et C. Vincent

En 1991, nous avons utilisé les procédures de dépistage suivantes: le piège à phéromone Phérocon 1C (2 pièges/verger) pour le dépistage des adultes de la tordeuse à bandes rouges, le carpocapse de la pomme, la tordeuse à bandes obliques et la tordeuse du pommier; la sphère rouge engluée (4 pièges/verger) pour les adultes de la mouche de la pomme; les pièges englués blancs (4 pièges/verger) pour la punaise terne et les adultes de l'hoplocampe de la pomme; le piège à phéromone Multi-Pher I (2 pièges/verger) pour la noctuelle du fruit vert; le piège à phéromone Multi-Pher II (2 pièges/verger) pour les adultes de la mineuse marbrée du pommier; le piège à phéromone Multi-Pher III (2 pièges/verger) pour les adultes des sésiides et la tordeuse des bourgeons du pommier. L'évaluation des populations d'acariens a été effectuée à partir de la collecte de feuilles et de la méthode de brossage et de comptage de Henderson et McBurnie. L'observation visuelle a permis d'évaluer les populations de thrips, de cicadelles et de pucerons. Les dommages ont été évalués à la récolte en examinant 1000 fruits par verger. (Tableau 1).

TABLEAU 1. POURCENTAGE DE DOMMAGES A LA RÉCOLTE (EXAMEN DE 1000 FRUITS)

AN	Mou	Carpo	ChFr	PB	TBO	CP	PT	AutP	Hop	TBR	TOTAL insectes	Tavelure
VERGERS COMMERCIAUX												
1987	0.08	0.00	0.38	0.00	0.84	0.06	1.90	0.58	0.80	0.08	4.70	3.50
1988	0.40	0.00	0.40	0.00	0.00	0.30	1.50	1.10	0.10	0.00	4.11	2.16
1989	0.00	0.00	0.40	0.00	0.50	0.10	2.80	0.60	0.00	0.00	4.40	0.40
1990	0.00	0.00	0.08	0.00	0.12	3.28	1.46	0.08	0.04	0.00	5.06	2.24
1991	0.00	0.00	0.80	0.00	0.10	0.2	1.9	0.9	0.40	0.00	4.70	0.20
VERGER NON-TRAITÉ (Fongicides contre la tavelure seulement)												
1987	53.3	21.1	6.9	4.4	4.1	88.3	7.7	31.2	1.4	0.00	218.2	44.8
1988	23.7	22.0	20.7	2.9	5.0	79.9	13.3	14.6	3.5	0.00	185.6	33.9
1989	18.6	8.8	26.1	4.9	7.4	42.7	29.0	24.3	18.2	0.00	180.0	0.02
1990	98.2	39.2	78.6	2.2	0.0	82.4	11.4	65.4	10.4	0.00	387.8	0.60
1991	55.6	43.4	56.4	0.0	3.0	100.0	8.6	20.6	9.6	14.6	314.4	0.20

Mou: mouche de la pomme | Carpo: carpocapse de la pomme | ChFr: chenilles frugivores, soit TBO gén. d'hiver, tordeuse du pommier et noctuelle du fruit vert | PB: pique-bouton du pommier | TBO: tordeuse à bandes obliques, génération d'été | CP: charançon de la prune | PT: punaise terne | AutP: autres punaises phytophages | Hop: Hoplocampe de la pomme | TBR: tordeuse à bandes rouges

En 1991, les captures de la noctuelle du fruit vert, *Orthosia hibisci* Guenée, ont été beaucoup plus faibles que celles de l'an dernier dans les vergers commerciaux de la région de Montréal. Dans la région de Québec, la situation inverse s'est produite puisque cette année les captures d'adultes ont été beaucoup plus élevées qu'en 1990.

Les conditions printannières ont été peu favorables à l'activité de la punaise terne, *Lygus lineolaris* Palisot de Beauvois, dans les vergers. Les captures de cet insecte ont été en moyenne légèrement inférieures à celles de l'an dernier. Des dégâts de piqûre ont été observés sur les fruits mûrs (1.9 %) mais, dans la plupart des cas, ces dommages n'ont pas déclassé les pommes.

La période d'activité de l'hoplocampe de la pomme, *Hoplocampa testidunea* (Klug), a débuté autour du 14 mai dans la région de Montréal et elle a duré environ 3 semaines. Dans le sud-ouest, les niveaux de capture ont été inférieurs à ceux de l'an passé. Dans la région de Deux-Montagnes, ils ont été plus élevés. Dans la région de Québec, l'activité de l'hoplocampe a débuté autour du 21 mai et les niveaux de captures ont été beaucoup plus élevés qu'en 1990. Dans certains vergers de cette région, on a capturé jusqu'à 70 adultes cette année (1989=53). Dans la plupart des vergers commerciaux, les dommages sur fruits mûrs ont été faibles sauf dans les vergers à utilisation réduite de pesticides. D'après les observations effectuées, dans le cas où la femelle adulte de l'hoplocampe a pondu son oeuf mais où celui-ci n'a pu poursuivre son développement, les dégâts causés (piqûre à la base du fruit) peuvent être confondus avec ceux de la punaise terne.

L'activité du charançon de la prune, *Conotrachelus nenuphar* Herbst, a été faible et l'insecte a causé moins de dommages qu'en 1990 dans les vergers commerciaux (1991=0.2; 1990=3.28). La pression est demeurée très forte dans le verger non traité. Ainsi 100 % des fruits ont subi des dommages d'oviposition ou de nutrition en 1991 (1990=82.4).

Dans tous les vergers commerciaux dépistés, les captures du carpocapse de la pomme, *Cydia pomonella* L., ont été beaucoup plus élevées que l'an passé mais il n'y a pas eu de dommages à la récolte. En verger non traité, les dommages sur fruits ont été comparables à ceux enregistrés en 1990 (1991=43.4; 1990=39.2).

Soulignons que cette année, la sphère rouge a remplacé le piège AM_R pour le dépistage de la mouche de la pomme, *Rhagoletis pomonella* Walsh, dans tous les vergers commerciaux. Dans la région de Montréal, les premiers adultes ont été capturés le 25 juin dans un verger non traité et le 9 juillet dans un verger commercial. Dans le verger non traité la pression a été forte. Dans les vergers commerciaux de la région de Montréal, les niveaux de captures ont été faibles et dans plusieurs cas n'ont pas atteint le seuil de traitement. Il n'y a pas eu de dommages à la récolte. Dans la région de Québec, les premiers adultes ont été capturés le 2 juillet. Les niveaux de captures ont été très élevés, particulièrement sur la rive sud du fleuve St-Laurent mais les interventions effectuées ont permis l'obtention de fruits exempts de piqûres de pontes à la récolte.

Il y a eu une recrudescence importante des captures de la mineuse marbrée, *Phyllonorycter blancardella* (Fab.), dans la plupart des vergers commerciaux de la région de Montréal. Pendant l'été, les captures ont atteint des seuils très élevés surtout dans les vergers qui, au stade du bouton rose, avaient été traités avec un insecticide organophosphate ou qui n'avaient reçu aucun insecticide à ce stade. Le taux de parasitisme a été généralement peu élevé dans les vergers infestés. Dans la région de Québec, les captures ont été supérieures à celles de l'an passé mais n'ont jamais atteint de seuils critiques.

En 1991, les niveaux de captures de la tordeuse à bandes obliques, *Choristoneura rosaceana* Harris, ont été plus élevés que ceux de l'an dernier dans la plupart des vergers commerciaux ainsi que dans les vergers non traités. Cette année encore, dans la région de Deux-Montagnes, les traitements insecticides ont été peu efficaces et les dommages à la récolte sont demeurés élevés.

Dans presque tous les vergers commerciaux, on a effectué plus de captures de la tordeuse à bandes rouges, *Argyrotaenia velutinana* (Wlk.), qu'en 1990. Il en a été de même dans le verger non traité. Aucun dommage n'a été noté en vergers commerciaux. Dans le verger non traité les dommages ont atteint 14.6 %. En 1991, les captures de la tordeuse des bourgeons du pommier, *Platynota idaeualis* (Walker), ont légèrement diminué dans les vergers commerciaux. Elles ont augmenté dans le verger non traité.

Les captures de la sésie du cornouiller, *Synanthedon scitula* (Harris) , ont atteint des niveaux très élevés cette année et la période d'activité a été plus longue que celle des années précédentes. Les niveaux de captures ont varié beaucoup d'un verger commercial à l'autre. Dans certains vergers on a capturé jusqu'à 250 sésies au cours de la saison. De tels niveaux de captures ont nécessité une ou deux interventions.

Dans la région de Québec, les pucerons ont été peu abondants. La sécheresse du mois de juillet a été peu favorable à la croissance des pousses végétatives qu'affectionne particulièrement le puceron vert. Dans la région de Montréal, les populations de puceron vert du pommier, *Aphis pomi* De Geer, et de puceron de la spirée, *Aphis citricola* (van der Goot), ont été très variables d'un verger à l'autre et souvent reliée à la présence de pousses végétatives. Dans certains cas, on a pu observé des taux de parasitisme et de prédation élevés (coccinelles, larves de syrphes, de chrysopes et de cécidomies). Des infestations sévères de puceron lanigère, *Eriosoma lanigerum* Hausm., ont été rapportées dans quelques vergers.

Les populations de cicadelles blanches, *Typhlocyba pomaria* MCA, ont été abondantes dans certains vergers en début de saison. Les traitements effectués au stade du calice ont généralement permis un bon contrôle des populations sauf dans quelques vergers, où elles sont demeurées élevées jusqu'à la récolte.

Pour une deuxième année consécutive, le thrips du poirier, *Taeniothrips inconsequens* (Uzel), a causé des infestations au stade du débourrement dans la région de Deux-Montagnes. Les vergers situés près d'érablières ont été les plus touchés et certains ont dû être traités. D'après les relevés forestiers, l'insecte est établi dans les érablières du Québec depuis plusieurs années. En 1991, les relevés indiquent que les populations de thrips ont été très élevées dans les érablières de cette région.

La plupart des pomiculteurs ont appliqué de l'huile en début de saison contre les oeufs de tétranyque rouge, *Panonychus ulmi* (Koch). Ce traitement a été en général très efficace. L'activité du tétranyque à deux points, *Tetranychus urticae* (Koch), a débuté tôt cette année. L'activité des femelles hivernantes sur les feuilles de pommier a été observée dès la deuxième semaine du mois de mai dans la région de Montréal et autour du 20 mai dans la région de Québec. La chaleur et la sécheresse survenus pendant le mois de juillet ont nécessité une ou deux autres interventions contre le tétranyque rouge ou le tétranyque à deux points. Dans quelques vergers, les populations élevées de l'ériophyiide du pommier, *Aculus schlechtendali* (Nal.), ont justifié une intervention chimique. L'efficacité des traitements acaricides a été rapportée comme très variable.

Faits saillants

En 1991, le volume de production a été normal mais une partie de la récolte a été touchée par la sécheresse et la grêle. Dans le verger témoin, la pression des insectes a été légèrement inférieure à celle de l'an passé (1991=314.4; 1990=387.8). Il en a été de même dans les vergers commerciaux (1991=4.7; 1990=5.06). Les acariens phytophages sont demeurés une préoccupation majeure. Le contrôle de la tavelure, *Venturia inaequalis* (Cke.), a été excellent et les dommages sur fruits à la récolte ont été faibles (1991=0.2; 1990=2.24).

A. Pucat

The spotted tentiform leafminer, *Phyllonorycter blancardella* (Fab.), was abundant on apple leaves in abandoned (untreated) orchards in Frelighsburg, Quebec, in June.

In Frelighsburg, the pistol case-bearer, *Coleophora malivorella* Riley, and the bagworm, *Hyaloscotes pithopoera* (Dyar), were collected in mid June.

Ontario

K.L. Nystrom & P.D. Syme

The apple-and-thorn skeletonizer,*Choreutis pariana* (Clemens), was by far the most reported pest of apple in this category with 28 calls made by local homeowners. The next most popular pest affecting pome fruits was the codling moth, *Cydia pomonella* (L.), which was reported 4 times. The apple maggot, *Rhagoletis pomonella* (Walsh), was reported 2 times damaging apple trees in the Sault Ste. Marie and Algoma Districts. Pests reported once included the pearslug sawfly, *Caliroa cerasi* (L.), click beetles (Elateridae) from Desbarats, the flatheaded appletree borer, *Chrysobothris femorata* (Oliv.), and unidentified leafrollers.

K.E. Romel & M.D. Dykstra

Pests identified on apple included the apple-and-thorn skeletonizer, *Choreutis pariana* (Clerck) (2), the apple maggot, *Rhagoletis pomonella* (Walsh) (2), the codling moth, *Cydia pomonella* (L.) (1), the fruittree leafroller, *Archips argyrospilus* (Walker) (1), the plum curculio, *Conotrachelus nenuphar* (Herbst) (1), and the shothole borer, *Scolytus rugulosus* (Muller) (1). Pests identified on pear included the pear slug, *Caliroa cerasi* (L.) (1), and the codling moth (1). Large numbers of march flies (Bibionidae) were reported in one orchard in Penetanguishene, Ontario, on May 22.

Two telephone enquiries regarding the apple maggot were also received.

A. Pucat

The spotted tentiform leafminer, *Phyllonorycter blancardella* (Fab.), was abundant on apple leaves in abandoned (untreated) orchards in Ottawa in June. Usually 4 to 6 leafminer larvae per leaf were present. Hymenopterous parasites of the leafminer were also common. In both locations, larvae of the gypsy moth, *Lymantria dispar* (L.), and tussock moth, *Orgyia leucostigma* J.E. Smith, were also received.

In one of the Ottawa orchards, a larva of *Heterocampa guttivitta* (Wlk.), was collected on apple leaves on June 17th. The apple maggot, *Rhagoletis pomonella* (Walsh), and the plum curculio, *Conotrachelus nenuphar* (Herbst), were common in apples in Ottawa in July and early August.

INSECT AND RELATED PESTS OF STONE FRUITS
LES RAVAGEURS DES FRUITS A NOYAUX

Ontario

K.L. Nystrom and P.D. Syme

The wild-cherry sphinx, *Sphinx drupiferarum* J.E. Smith, was reported 2 times on cherry. Other insects in this category included an owlet moth, *Acronicta superans* Gn., on plum, the pearslug sawfly, *Caliroa cerasi* (L.), and the plum curculio, *Conotrachelus nenuphar* (Herbst).

K.E. Romel & M.D. Dykstra

The plum curculio, *Conotrachelus nenuphar* (Herbst), was identified on plums from a home garden in Toronto, Ontario.

INSECT AND RELATED PESTS OF SMALL FRUITS
LES RAVAGEURS DE PETITS FRUITS

New Brunswick/Nouveau-Brunswick

C.M. Maund

The twospotted spider mite, *Tetranychus urticae* Koch, continued to be a major pest in strawberry plantings.

Injury caused by the strawberry weevil, *Anthonomus signatus* Say, was generally moderate.

The blackvine weevil, *Otiorhynchus sulcatus* (Fab.), was not a major problem this year.

The tarnished plant bug, *Lygus lineolaris* (P. de B.), was a moderate problem on strawberries.

Thrips, tentatively identified as *Thrips tabaci* Lindeman, started to be observed on strawberries.

There was an increase in redstriped fireworm, *Aroga trialbamaculella* Chambers, infestations on blueberries.

Nova Scotia/Nouvelle-Ecosse

L. Crozier

Lowbush blueberry

The 1991 sweepnet survey had 35 participating growers and included 316 fields in six counties. Six species of insects were found in numbers high enough to require control measures. Infestations were present in 29 fields. In general damage was very minimal to the fields because of early detection of infestations.

The insects involved were as follows: the blueberry leaf beetle, *Pyrrhalta vaccinii* (Fall), 3 fields; the blueberry flea beetle, *Altica sylvia* Malloch, 10 fields; the blueberry sawfly, *Pristophora* sp., 2 fields; the blueberry case beetle, *Neochlamisus cribripennis* (LeConte), 4 fields; the blueberry spanworm, *Itame argillacearia* Packard, 8 fields; the redstriped fireworm, *Aroga trialbamaculella* (Chamb.), 2 fields.

Two other species of spanworms, *Itame brunneata* (Thunberg) and *Itame andersoni orientis* Ferguson, were found in association with *I. argillacearia*. Three fields had significant numbers of these species. These species will have to be considered in future surveys.

Blueberry leaftier, *Croesia curvalana* (Kearfott), populations remained low this year.

The small leaf chafer, *Serica tristis* LeConte, occurred in large numbers in one blueberry field. This insect does not seem to do much damage to the blueberry plants.

Unusually high numbers of grasshoppers (various species) were recorded in one of the fields in the survey.

Strawberry

The strawberry weevil, *Anthonomus signatus* Say, was the most significant pest of strawberries this year. Damage ranged from low to moderate.

The tarnished plant bug, *Lygus lineolaris* (Palisot de Beauvois), caused damage in some fields. Losses of up to 10 % were recorded.

Twospotted spider mite, *Tetranychus urticae* Koch, damage was quite variable this year. Strawberry nursery growers followed a reduced spray program and as a consequence did not have any problems with control of this pest.

The strawberry root weevil, *Otiorhynchus ovatus* (L.), caused severe damage to about 3 hectares of strawberries.

Yellowjackets, *Vespula vulgaris* (L.), caused extensive damage to day-neutral strawberries. The damage was caused by foraging workers chewing the surface of the fruit, thus reducing its marketability. In some instances large holes were made in the fruit.

Other Small Fruits

Blackheaded fireworm, *Rhobopta naevana* (Hubner), and cranberry girdler, *Chrysoteuchia topiaria* (Zeller), adults were abundant. Little damage from the larvae occurred due to an excellent control program.

The cranberry fruitworm, *Acrobasis vaccinii* Riley, was not a problem this year.

The winter moth, *Operophtera brumata* (L.), was a problem in two highbush blueberry plantings.

Québec

A. Pucat

At the end of May a tortricid larva, *Olethreutes tiliana* (Heinr.), was collected from raspberry foliage in an apple orchard in Frelighsburg, Quebec.

Ontario

K.L. Nystrom & P.D. Syme

Reported once in this category was the raspberry fruitworm, *Byturus unicolor* Say, the snowball aphid, *Neoceruraphis viburnicola* (Gill.), found on highbush cranberry and the European fruit lecanium, *Parthenolecanium corni* (Bouché), on grape.

K.E. Romel & M.D. Dykstra

Millipedes (species unidentified) were found in strawberries grown in Woodstock, Ontario.

The fall webworm, *Hyphantria cunea* (Drury), was identified on high bush blueberry plants from Perkinsfield, Ontario.

The grape phylloxera, *Daktulosphaira vitifoliae* (Fitch), was identified on grape plants in a home garden in Toronto, Ontario.

INSECT AND RELATED PESTS OF MISCELLANEOUS CROPS
LES RAVAGEURS DE CULTURES DIVERSES

Ontario

K.L. Nystrom & P.D. Syme

Four callers were curious about elm sphinx moth larvae, *Ceratomia amyntor* (Geyer), making this insect the most popular in this category. Giant waterbugs, *Lethocerus americanus* (Leidy), tiger swallowtail butterfly larvae, *Papilia glaucus canadensis* R. & J., and unidentified slugs were all reported 3 times. The cicada, *Tibicen pruinosa* (Say), had been brought in for identification 2 times throughout the summer. Bee flies (Bombyliidae) from Horsehoe Bay, midges (Chironomidae), the aster cutworm, *Cucullia convexipennis* G. & R., the monarch butterfly, *Danaus plexipus* (L.), shore flies (Ephydridae), brush-footed butterflies (Nymphalidae) found on perennials around the home, the cabbage butterfly, *Artogeia rapae* (L.), a stone fly (Plecoptera), the plume moth, *Cnaemidophorus rhododactylus* (D. & S.), cecropia moth larva, *Hyalophora cecropia* (L.), and adults of the white spotted sawyer beetle, *Monochamus scutellatus* (Say), were all reported once.

K.E. Romel & M.D. Dykstra

Springtails (species unidentified) and mites from the family Aoetidae were collected from soil at an earthworm farm in Haileybury, Ontario.

Dark-winged fungus gnats (Sciaridae) and humpbacked flies (Phoridae) were submitted from a bait farm in Smithville, Ontario.

Root maggots (species unidentified) from peanut plants were submitted from an experimental planting on the roof of a building in Guelph, Ontario, on July 16.

Amphibious leeches, *Haemopsis grandis*, were found in large numbers in garden soil in Windsor, Ontario, on May 15.

Three samples of mermithoid nematodes, *Mermis subnigrescens*, were submitted in the spring for identification. Horsehair worms were found in a puddle in Guelph, Ontario, on Aug. 16.

One telephone enquiry was received regarding the breeding of the greater wax moth, *Galleria mellonella* (L.), for use as fish bait.

Two enquiries were received regarding information on the breeding of scorpions for pets.

A. Pucat

At the end of July, larvae of the rat-tailed maggot, *Eristalis tenax* (L.), were identified from manure.

Black carpenter ants, *Camponotus pennsylvanicus* (De Geer), green bottle flies, *Lucilia sericata* and vinegar flies, *Drosophila* sp., collected in houses, were identified.

INSECT AND RELATED PESTS OF ORNAMENTALS
LES RAVAGEURS DES CULTURES ORNEMENTALES

Nova Scotia/Nouvelle-Ecosse

L. Crozier

The winter moth, *Operophtera brumata* (L.), and fall cankerworm, *Alsophila pometaria* (Harris), were abundant on a wide variety of shade trees this spring. This coupled with frost damage to new leaves lead to a fair amount of defoliation in some parts of the province.

The alder flea beetle, *Altica ambiens* LeConte, was abundant throughout the province. While their activity on alder was not a concern, many calls were received from people wondering if they would attack other trees or their gardens. In some instances large numbers of beetles congregated on the sides of houses after their food supply had been depleted.

The fall webworm, *Hyphantria cunea* (Drury), was very abundant. Some defoliation was caused by this insect.

Other inquiries about ornamental pests included: eriophyid mites, mostly on maple; the viburnum aphid, *Aphis viburniphilia* Patch; the black vine weevil, *Otiorhynchus sulcatus* (Fab.), on rhododendron; the roundheaded appletree borer, *Saperda candida* Fab., in elm; the bronze birch borer, *Agrilus anxius* Gory; the European pine sawfly, *Neodiprion sertifer* (Geoffroy); the birch sawfly, *Arge pectoralis* (Leach); the redhumped caterpillar, *Schizura concinna* (J. E. Smith); and the birch tubemaker, *Acrobasis betulella* Hulst.

Ontario

Extension de l'aire de répartition du Criocère du lys, *Lilioceris lilii* (Scopoli)

L. LeSage

Le criocère dy lys est apparu dans la région d'Ottawa en 1981 (LeSage 1983, *Nat. Can.* 110: 95-97), vraisemblablement introduit de Montréal par le commerce des lys cultivés.

Depuis ce temps, l'insecte y a causé de nombreux ravages, mais toujours du côté de l'Ontario, même si plusieurs sites d'infestation se situent tout près de la rivière des Outaouais qui sépare cette province de la frontière du Québec.

Une pullulation a été observée pour la première fois à Aylmer, au cours de l'été 1991. L'infestation était localisée, comme à Ottawa et les dommages causés aux plantes ont été très importants.

La migration tardive du criocère du lys du côté nord de l'Outaouais s'explique probablement par la grande taille de la rivière. Si cette hypothèse est exacte, il aura fallu dix ans au criocère dy lys pour franchir cet obstacle naturel.

K.L. Nystrom and P.D. Syme

This year in the Sault Ste. Marie area the birch leafminer, *Fenusa pusilla* (Lep.), dominated this category with 17 calls, a significant increase from last years inquiries. The European fruit lecanium, *Parthenolecanium corni* (Bouché), was second in importance within this category. Eight complaints were made concerning this insect found on oak (4 calls), fig, dogwood, sugar maple and elm (1 call each). As well 8 calls were received concerning unidentified leafrollers (Tortricidae) on maple (3 calls), oak, crabapple and poplar (1 call each) as well as concern regarding the maple bladdergall mite, *Vasates quadripedes* (Shimer). The forest tent caterpillar, *Malacosoma disstria* Harris, and the maple petiole borer, *Caulocampus acericaulis* (MacG.), accounted for 7 calls each. The pine web-spinning sawfly, *Acantholyda erythrocephala* (L.), the spruce budworm, *Choristoneura fumiferana* (Clem.) (1 call from Hamilton), and the spruce spider mite, *Oligonychus ununguis* (Jac.) (1 call from Brampton), accounted for 6 calls each. Unidentified aphids on various hosts accounted for 5 calls. As well, the whitemarked tussock moth, *Orgyia leucostigma intermedia* (Fitch), totalled 5 calls one of which was concerned with a cocoon found on bananas and had been brought in to be identified by the Algoma Health Unit. The yellowheaded spruce sawfly, *Pikonema alaskensis* (Roh.) (1 call from Brampton), and the mountain ash sawfly, *Pristiphora geniculata* (Hartig), reported 4 calls each. Three calls each were noted for the European elm scale, *Gossyparia spuria* (Mod.), the gypsy moth, *Lymantria dispar* (L.) (all out of town calls - Brantford, Toronto, Mississauga), and a petiole-leaf gall aphid on eastern cottonwood, *Pemphigus* sp. Inquiries concerning white flies (Alerodidae), leaf hoppers identified as *Erythroneura* sp. on virginia creeper, an oak gall wasp, *Dryocosmus quercuspalustris* (O.S.), the pine spittlebug, *Aphrophora cribrata* (Wlk.), the ocellate gall midge, *Acericecis* (=*Cecidomyia*) *ocellaris* (O.S.), the obliquebanded leafroller, *Choristoneura rosaceana* (Harris), the introduced pine sawfly, *Diprion similis* (Hartig), the elm leafminer, *Fenusa ulmi* Sund., planthoppers (Fulgoroidea) identified from birch and virginia creeper, the fall webworm, *Hyphantria cunea* (Dru.), the poplar leaf petiolegall aphid, *Pemphigus populicaulis* Fitch, the white pine weevil, *Pissodes strobi* (Peck), and crane flies (Tipulidae), totalled 2 calls each. The following species were reported once: the ash bladdergall mite, *Aceria chrondriphora* K.; the cocoon of the luna moth, *Actias luna* (L.); the spruce gall adelgid, *Adelges lariciatus* (Patch); the bronze birch borer, *Agrilus anxius* Gory; the polyphemus moth, *Antheraea polyphemus* (Cram.); the fruittree leafroller, *Archips argyrospilus* (Walker); the pearslug sawfly, *Caliroa cerasi* (L.), on rose; the lilac leafminer, *Caloptilia syringella* (Fab.); spittlebugs (Cercopidae) on potentila; the waved sphinx, *Ceratomia undulosa* (Walker), on ash; the snowball aphid, *Ceruraphis viburnicola* (Gill.); the white pine aphid, *Cinara strobi* Fitch; a scale insect (Coccidae) brought in by Sault Ste. Marie Parks department; the orange spruce needleminer, *Coleotechnites piceaella* (Kft.), from Chatham in a Norway spruce seed plantation; the white pine cone beetle, *Conophthorus coniperda* (Schw.), inquiry from the Muskoka Lake District; the poplar-and-willow borer, *Cryptorhynchus lapathi* L., on eastern cottonwood; oak apple galls (Cynipidae); other specifically unidentified oak galls; an aphid identified as *Drapanophis* sp. on maple; the sawfly, *Eriocampa ovata* (L.); mites identified as *Eriophyes* sp. on silver maple; eriophid mites (Eriophydae) on boxelder; the achemon sphinx, *Eumorpha achemon* (Drury); the pale tussock moth, *Halysidota tessellaris* (J.E. Smith); the root collar weevil, *Hylobius radicis* Buch., at Penatanguishene found in a Christmas tree plantation; Thessalon tree nursery requested control for the Lygus bug, *Lygus* sp.; the poplar gall borer, *Mecas inornata* Say; the golden rod spider, *Misumena vatia* (Clerck), on potentila; the viburnum borer, *Synanthedon viburni* Engelh.; the European pine sawfly, *Neodiprion sertifer* (Geoff.); the speckled green fruitworm, *Orthosia hibisci* (Gn.); the big poplar sphinx, *Pachysphinx modesta* (Harr.); the columbine borer, *Papaipema lysimacheae* Bird; the poplar petiolegall aphid, *Pemphigus populitransversus* Riley; the pine bark adelgid, *Pineus strobi* (Hartig); the pale green weevil, *Polydrusus impressifrons* Gyllenhal; the cottony maple scale, *Pulvinaria innumerabilis* (Rathv.); the variable caterpillar, *Pyrrhia exprimens* (Walker); the San Jose scale, *Quadraspidiotus perniciosus* (Comstock); the willow cabbagegall midge, *Rhabdophaga salicisbrassicoides* Pack.; the maple leafroller, *Sparganothis acerivorana* Mack; the great ash sphinx, *Sphinx chersis* (Hubner); a twig borer, *Stephanopachys cribratus* (LeConte); the maple webworm, *Tetralopha asperatella* (Clemens); the maple spindlegall mite, *Vasates aceris-crumena* (Riley); unidentified borers on ash trees in a parking lot in southern Ontario; damage to balsam fir in Echo Bay due to drought; a wood wasp, *Xiphydria maculata* Say; a webworm, *Yponomeuta cagnagella* Hubner, on Euonymus; unidentified grasshoppers at Sioux Lookout eating jack pine seedlings; unidentified leaf beetles on willow; unidentified mites on mountain ash.

K.E. Romel & M.D. Dykstra

The following pests of ornamentals were submitted to the Pest Diagnostic Clinic for identification. They are listed below in descending order of frequency.

Pests on Coniferous Hosts:

white pine weevil (3)	*Pissodes strobi* (Peck)
introduced pine sawfly (3)	*Diprion similis* (Hartig)
pitch mass borer (2)	*Synanthedon pini* (Kellicott)
spruce spider mite (2)	*Oligonychus ununguis* (Jacobi)
northern cedar bark beetle (2)	*Phloeosinus canadensis* Swaine
spruce gall aphid (1)	*Adelges lariciatus* Patch
juniper scale (1)	*Carulaspis juniperi* (Bouche)
pine tortoise scale (1)	*Toumeyella parvicornis* (Cock.)
arborvitae leafminer (1)	*Argyresthia thuiella* (Packard)
round-headed borer (1)	*Monochamus sp.*
eastern spruce gall adelgid (1)	*Adelges abietis* (L.)

Pests on Deciduous Hosts:

birch catkin bug (6)	*Kleidocerys resedae geminatus* Say
aphids (4)	Aphididae
euonymus scale (4)	*Unaspis euonymi* (Comstock)
elm leaf beetle (3)	*Pyrrhalta luteola* (Muller)
bronze birch borer (3)	*Agrilus anxius* Gory
lily leaf beetle (2)	*Lilioceris lilii* (Scopoli)
roseslug (2)	*Endelomyia aethiops* (F.)
maple bladdergall mite (2)	*Vasates quadripedes* Shimer
honeylocust plant bug (2)	*Diaphnocoris chlorionis* (Say)
leafhopper (on honeylocust) (2)	*Macropsis fumipennis* (Gillette and Baker)
eriophyid mites (2)	*Eriophyes spp.*
crimson erineum mite (2)	*Eriophyes regulus* (Hodgkiss)
birch leafminer (2)	*Fenusa pusilla* (Lepeletier)
European elm bark beetle (1)	*Scolytus multistriatus* (Marsham)
native elm bark beetle (1)	*Hylurgopinus rufipes* (Eichhoff)
Fletcher scale (1)	*Parthenolecanium fletcheri* (Cockerell)
uglynest caterpillar (1)	*Archips cerasivorana* (Fitch)
maple petiole borer (1)	*Caulocampus acericaulis* MacGillivray
lecanium scale (1)	*Lecanium sp.*
gypsy moth (1)	*Lymantria dispar* (L.)
magnolia scale (1)	*Neolecanium cornuparvum* (Thro)
poplar leaf petiolegall aphid (1)	*Pemphigus populicaulis* Fitch
imported willow leaf beetle (1)	*Plagiodera versicolora* (Laicharting)
poplar vagabond gall aphid (1)	*Mordvilkoja vagabunda* (Walsh)
leaf petiole gall (1)	*Cecidiomyia sp.*
twospotted spider mite (1)	*Tetranychus urticae* Koch
spider mites (1)	Tetranychidae
bud gall mite (1)	*Eriophyes betulae* Steb.
lilac leafminer (1)	*Caloptilia syringella* (F.)
short-horned oakworms (1)	*Anisota finlaysoni* Riotte
ash flower gall mite (1)	*Aceria fraxiniflora* (Felt)
sawflies (1)	---
oak slug sawfly (1)	*Caliroa fasciata* (Norton)
hermit flower beetle (1)	*Osmoderma eremicola* Koch

Bark beetles (Scolytidae) and the pearslug sawfly, *Caliroa cerasi* (L.), were identified on purple leaf sandcherry.

Uncommon submissions:

A blister beetle, *Lytta sp.*, was feeding on pink lupins in Perth, Ontario, in mid-June.

Vibernum leaf beetles, *Pyrrhalta viburni* (Paykull), from Willowdale, Ontario, were submitted in mid-June.

A spiny oak-slug moth caterpillar, *Euclea delphinii* Bdv., and a stink bug, *Brochymena sp.*, were collected on July 31 from maple trees in a home garden in Moffat, Ontario.

A hagmoth caterpillar, *Phobetron pithecium* (J.E. Smith), was collected on Aug. 12 from maple trees in a home garden in Wellington, Ontario.

Telephone requests for information on the following pests of ornamentals were received at the Clinic:

gypsy moth (19)	*Lymantria dispar* (L.)
cecropia moth (16)	*Hyalophora cecropia* (L.)
wood-boring insects (9)	---
bronze birch borer (8)	*Agrilus anxius* Gory
birch leafminer (5)	*Fenusa pusilla* (Lepeletier)
vibernum leaf beetle (5)	*Pyrrhalta viberni* (Paykull)
elm leaf beetle (5)	*Pyrrhalta luteola* (Muller)
birch catkin bug (4)	*Kleidocerys resedae geminatus* Say
euonymus scale (4)	*Unaspis euonymi* (Comstock)
tent caterpillars (3)	*Malacosoma spp.*
pitch mass borer (3)	*Synanthedon pini* (Kellicott)
maple petiole borer (2)	*Caulocampus acericaulis* MacGillivray
scale insects (2)	Coccoidea
Japanese beetle (2)	*Popillia japonica* Newman
whiteflies (2)	Aleyrodidae
spruce budworm (1)	*Choristoneura fumiferana* (Clemens)
honeysuckle witches-broom aphid (1)	*Lonicera sp.*
white pine weevil (1)	*Pissodes strobi* (Peck)

Giant hornets, *Vespa crabro germana* (Christ), were reported removing the bark fom lilac bushes in Canfield, Ontario, on Oct. 9.

A. Pucat

At the end of May the following pests were common in Ottawa: tent caterpillars, *Malacosoma americanum* (Fab.) and *Malacosoma disstria* Hubner; *Pyrrhalta viburni* on *Viburnum*; *Neodiprion abietella* on *Abies* and *Pinus* spp. In mid June a plume moth that feeds on roses, *Cnaemidophorus rhododactylus* (D. & S.) was identified, and at the end of June a sphinx moth, *Eumorpha achemon* (Drury), collected on Boston ivy, was identified.

Saskatchewan

D.A. Reynard and G.B. Neill

The following is a summary of insects and mites that were noted causing damage to trees and shrubs at the PFRA Shelterbelt Centre at Indian Head, Saskatchewan, in 1991.

Spring cankerworm, *Paleacrita vernata* (Peck), populations increased in 1991 causing severe defoliation of Siberian elm and Manitoba maple sheltebelts on the Shelterbelt Centre. Ash shelterbelts were again heavily attacked by ash plant bugs, *Tropidosteptes amoenus* (Reuter), causing stippling and curling of leaves and a reduction of annual growth. Spruce spider mite, *Oligonychus ununguis* (Jacobi), populations became abundant early in the growing season causing discoloration of needles. Infestations of the cottonwood leaf beetle, *Chrysomela scripta* Fab., resulted in moderate to severe defoliation of poplar and willow stooling beds throughout the summer. Control measures were required again this year on caragana seedlings to prevent complete defoliation by grasshoppers, *Melanoplus* spp. The caragana aphid, *Acyrthosiphon caraganae* (Cholodk.), infested caragana in late summer causing a reduction of annual growth. Several isolated outbreaks of the prairie tent caterpillar, *Malacosoma c. lutescens* (Neumoegen & Dyar), were noted causing sporadic defoliation of choke cherry and cotoneaster shrubs. Yellowheaded spruce sawflies, *Pikonema alaskensis* (Rohwer), were recorded causing moderate defoliation of Colorado spruce shelterbelts.

Other insects species common on the Shelterbelt Centre that caused moderate to severe damage to their respective hosts were: the cottonwood crown borer, *Sesia tibialis* (Harris); the poplar budgall mite, *Aceria parapopuli* Keifer; the spruce eriophyd mite, *Nalepella tsugifoliae* Keifer; the pine needle scale, *Chionaspis pinifoliae* (Fitch); the larch sawfly, *Pristiphora erichsonii* (Hartig); and the woolly oak gall, *Andricus ignotus* (Bassett).

Numerous insect inquiries were received at the PFRA Shelterbelt Centre in 1991 requesting information on insects of trees and shrubs. Most inquiries were received from rural areas of Saskatchewan, with the most common problems listed below in descending order of frequency.

Ash plant bug	*Tropidosteptes amoenus* (Reuter)
Cankerworm	*Paleacrita vernata* (Peck)
	Alsophila pometaria (Harris)
Spruce spider mite	*Oligonychus ununguis* (Jacobi)
Poplar budgall mite	*Aceria parapopuli* Keifer
Pine needle scale	*Chionaspis pinifoliae* (Fitch)
Ash bark beetles	*Hylesinus* spp.
Black willow aphid	*Pterocomma smithiae* (Monell)
Bronze birch borer	*Agrilus anxius* Gosy
Grasshoppers	--
Yellowheaded spruce sawfly	*Pikonema alaskensis* (Rohwer)
Aphids	--
Ash borer	*Podosesia syringae* (Harris)
Spruce budworm	*Choristoneura fumiferana* (Clemens)
Blister beetles	*Lytta* spp.
Prairie tent caterpillar	*Malacosoma c. lutescens*(Neumoegen & Dyar)
Cottonwood leaf beetle	*Chrysomela scripta* Fab.
Woolly oak gall	*Andricus ignotus* (Bassett)
Spiny elm caterpillar	*Nymphalis antiopa* (L.)
Polyphemus moth	*Antheraea polyphemus polyphemus* (Cramer)

L.Harris

The most common insects on trees, shrubs and ornamentals in Saskatchewan in 1991 were:

Aspen leaf beetle	*Chrysomela crotchi*
Black willow aphid	*Pterocomma smithiae*
Cooley spruce gall adelgid	*Adelges cooleyi*
Eight-spotted forester	*Alypia octomaculata*

Fall cankerworm	*Alsophila pometaria*
Forest tent caterpillar	*Malacosoma disstria*
Fruittree leafroller	*Archips argyrospilus*
Great ash sphinx	*Sphinx chersis*
Gypsy moth	*Porthetia dispar*
Honeysuckle aphid	*Hyadaphis tataricae*
Mourningcloak butterfly	*Nymphalis antiopa*
Pear slug	*Caliroa cerasi*
Pine needle scale	*Phenacaspis pinifoliae*
Poplar budgall mite	*Eriophyes parapopuli*
Prairie tent caterpillar	*Malacosoma c. lutescens*
Redheaded ash borer	*Neoclytus acuminatus*
Redhumped caterpillar	*Schizura concinna*
Rose curculio	*Rhynchites bicolor*
Spring cankerworm	*Paleacrita vernata*
Spruce aphid	*Cinara* sp.
Waved sphinx	*Ceratomia undulosa*
Western ash bark beetle	*Hylesinus californicus*
Yellownecked caterpillar	*Datana ministra*

British Columbia/Colombie-Britannique

R. Duncan

Elatobium abietinum (Walker)	spruce aphid
Lophocampa argentata (Packard)	silver-spotted tiger moth
Neuroterus saltatorius (Edwards)	jumping gall wasp
Phylloxera sp. nr. *glabra* (Heyden)	an oak leaf phylloxeran
Argyresthia cupressella (Walsingham)	cypress tip moth
Cryptorhynchus lapathi (L.)	poplar & willow borer
Malacosoma c. pluviale (Dyar)	western tent caterpillar
Operophtera brumata (L.)	winter moth
Otiorhynchus sulcatus (Fab.)	black vine weevil
Phoeosinus sequoiae Hopkins	redwood bark beetle
Periphyllus lyropictus (Kessler)	a maple aphid
Prionus californicus Motschulsky	California prionus
Thelaxes californica (Davidson)	an oak aphid
Yponomeuta malinella Zeller	apple ermine moth
Adelges cooleyi (Gillette)	cooley spruce gall adelgid
Adelges piceae (Ratzeburg)	balsam woolly adelgid
Adelges tsugae Annand	hemlock woolly adelgid
Agrilus anxius Gory	bronze birch borer
Agriotes lineatus	a click beetle
Aleyrodidae	white flies
Argyrotaenia citrana (Fernald)	orange tortrix
Archips rosana (L.)	a leafroller
Barypeithes pellucidus (Boheman)	a weevil
Besbicus mirabilis (Kinsey)	speckled gall
Biston cognataria (Guenee)	pepper & salt moth
Chamaecyparis nootkatensis G. & D.	a cypress gall midge
Chlorochroa ligata (Say)	conchuela
Cinara spp.	giant conifer aphids

Cnephasia longana (Hawarth)	omnivorous leaf tier
Contarinia pseudotsugae Condrashoff	Douglas-fir needle midge
Cremona cotoneastri Busck	cotoneaster webworm
Dendroctonus pseudotsugae Hopkins	Douglas-fir beetle
Diacrisia virginica (Fab.)	yellow woolly bear
Dichomeris marginella (Fab.)	juniper webworm
Disholcaspis eldoradensis (Beut.)	an oak twig wasp
Ditula angustiorana (Haworth)	a leaf roller
Dysaphis plantaginea (Passerini)	rosy apple aphid
Enarmonia formosana (Scopoli)	cherry bark tortrix
Eriocampa ovata (L.)	alder woolly sawfly
Euceraphis sp.	a birch aphid
Forficula auricularia L.	European earwig
Hyalophora euryalis (Boisduval)	Ceanothus silk moth
Hyphantria cunea (Drury)	fall webworm
Parthenolecanium corni Bouché	European fruit lecanium
Lophocampa maculata agassizi Harris	spotted tussock moth
Mindarus abietinus Koch	balsam twig aphid
Monarthrum scutellare (Leconte)	oak ambrosia beetle
Myzocallis sp.	an oak aphid
Myzus cerasi (F.)	black cherry aphid
Nymphalis antiopa (L.)	mourningcloak butterfly
Nematus ribesii (Scopoli)	imported current worm
Oligonychus ununguis (Jacobi)	spruce spider mite
Orgyia antiqua badia Hy. Edwards	rusty tussock moth
Orgyia pseudotsugata (McDunnough)	Douglas-fir tussock moth
Otiorhynchus ovatus L.	strawberry root weevil
Otiorhynchus singularis (L.)	clay coloured root weevil
Pegomya rubivora (Coq.)	raspberry cane maggot
Pemphigus populitransversus Riley	poplar petiolegall aphid
Phloeosinus punctatus Leconte	western cedar bark beetle
Phymatodes lecontei Linsley	an oak borer
Phytoptus pyri Pagerstecher	pear leaf blister mite
Pikonema alaskensis (Rohwer)	yellowheaded spruce sawfly
Physokermes hemicryphus (Dalman)	a spruce bud scale
Pityophthorus orarius Bright	a Douglas-fir twig beetle
Platarctia parthenos (Harris)	a tiger moth
Platypedia areolata Uhler	a cicada
Polyphylla crinita Leconte	a June beetle
Pyrrhalta decora carbo (Leconte)	Pacific willow leaf beetle
Rhyacionia buoliana (Schiffermuller)	European pine shoot moth
Schizura unicornis (J.E. Smith)	notodontid moth
Scolytus rugulosus (Ratzeburg)	shothole borer
Smerinthus cerisyi Kirby	willow sphinx
Strophosoma melanogrammum Forster	a leaf notching weevil
Synanthedon sequoiae (Hy. Edwards)	sequoia pitch moth
Synaphaeta guexi Leconte	a maple borer
Tipula paludosa Meigan	leather jacket
Trisetacus chamaecypari Smith	a yellow cypress mite
Xyleborus dispar (F.)	European shothole borer

INSECT AND RELATED PESTS OF HOUSEHOLDS
LES RAVAGEURS DOMESTIQUES

Nova Scotia/Nouvelle-Ecosse

L. Crozier

The larder beetle, *Dermestes lardarius* L., was the most commonly reported household pest. The incidence of this pest seemed to be higher than normal this year. A single specimen of *Dermestes signatus* LeConte was also received.

Eleven samples of pseudoscorpions (unidentified) were received.

A number of samples of root weevils were also sent in. These included the black vine weevil, *Otiorhynchus sulcatus* (Fab.) (5); the strawberry root weevil, *Otiorhynchus ovatus* (L.) (1); *Otiorhynchus rugifrons* (Gyllenhal) (2); and one clay-coloured weevil, *Otiorhynchus singularis* (L.).

Excessively wet weather this fall resulted in a large number of calls about millipedes and sowbugs, which were entering houses and apartment buildings. One sample of the greenhouse millipede, *Oxidus gracilis* Koch, was also received.

A number of calls and samples of carpenter ants, *Camponotus* sp., were received.

A sample of termites, family Rhinotermitidae, was received. They were found infesting a wooden pallet in a shipment of rubber from Malaysia. The termites and pallet were destroyed.

Other samples of household pests included: cockroaches, *Periplaneta* sp., *Blattella germanica* (L.); a camel cricket, *Ceuthophilus maculatus* (Harris); black carpet beetles, *Attagenus megatoma* (Fab.); the warehouse beetle, *Trogoderma inclusum* LeConte; powderpost beetles, *Lyctus* sp.; the wharf borer, *Nacerdes melanura* L.; and meal moths, *Pyralis farinalis* L.

Several samples of spiders found in grapes were submitted for identification. Interest arose when several specimens of black widow spider, *Laterodectus* sp., were reported in the province. A jumping spider, *Phiddipus johnsoni* C.G. Peckham, two clubionids and another salticid were received.

Other samples of spiders included: *Dolomedes vittatus* Walckenaer, *Dolomedes scriptus* Hentz, *Araneus diadematus* Clerck, *Araneus trifolium* (Hentz) and *Argiope aurantia* Lucas.

Ontario

K.L. Nystrom & P.D. Syme

The European earwig, *Forficula auricularia* L., again continues to dominate the number of complaints in the Sault Ste. Marie area with a total of 40 calls received, or 25 % of the inquiries in this category. Black carpenter ants, *Camponotus pennsylvanicus* (DeGeer), were reported damaging structures 11 times. Complaints about ants of various other kinds totalled 21. Three of these calls were concerned about flying ants, 1 call was concerned about ants in lumber that had been stored in the home and 3 other calls were about ants in the garden. Complaints about bees, wasps and hornets (Aphidae, Sphecidae and Vespidae), totalled 19 calls. Mud daubers, identified as *Chalybion* sp. (Sphecinae), received 4 calls from curious homeowners and one of these calls was from Bruce Mines.

Black carpet beetles, *Attagenus unicolor* (Brahm), and *Attagenus megatoma* (Fab.), were reported 6 times and once respectively. Cluster flies, *Pollenia rudis* (Fab.), reported to be invading houses, totalled 6 calls. The Algoma Health Unit reported fungus gnats (Mycetophilidae) invading an apartment. The house fly,

Musca domestica L., was also reported once. Fruit flies, *Drosophila* sp., totalled three calls each while blow flies (Calliphoridae) were reported once. Millipedes and sowbugs were reported once. The German cockroach, *Blattella germanica* (L.), was reported three times and other unidentified cockroaches were reported twice. The black vine weevil, *Otiorhynchus sulcatus* (Fab.), was noted three times and the strawberry root weevil, *Otiorhynchus ovatus* (L.), was reported by the Algoma Health Unit once. House spiders, totalled 6 calls, while orb weaver spiders, including the shamrock orb weaver, *Aranea trifolium*, totalled 4 calls, a water spider, *Dolomedes* sp., totalled three calls and wolf spiders (Lycosidae) totalled two calls. A call was received concerning harvestmen also known as daddy long legs (Phalangida) from Sault Ste. Marie, Michigan. As well, information was requested concerning the brown recluse spider, *Loxosceles reclusa* Gertsch & Muliak. Silverfish, *Lepisma saccharina* L., were reported 3 times.

The homewoners' curiosity is always aroused when insects emerge from firewood stored in houses or garages. Consequently, three calls were received concerning sawyer beetles/longhorned beetles (Cerambycidae). One of these calls came from a homeowner in Toronto. One call concerned the rustic borer, *Xylotrechus colonus* (Fab.), as well as bark beetles (Scolytidae) and two calls were noted for powder post beetles (Lyctidae).

Other pests found invading homes included a call from Espanola concerning snow fleas, as well as a report of larval click beetles (Elateridae), booklice (Psocoptera), and an assassin bug (Reduviidae) invading peoples homes.

K.E. Romel & M.D. Dykstra

The following pests of households were submitted for identification. They are listed in descending order of frequency.

larder beetles (11)	*Dermestes lardarius* L.
carpenter ants (7)	*Camponotus spp.*
leaf-footed bugs (7)	*Leptoglossus occidentalis* Heidemann
clothes moths (5)	Tineidae
dermestid beetles (5)	Dermestidae
wood roaches (5)	*Parcoblatta spp.*
pseudoscorpions (5)	Pseudoscorpiones
German cockroaches (4)	*Blattella germanica* (L.)
blow fly larvae (4)	Calliphoridae
sowbugs (3)	Isopoda
furniture beetles (3)	Anobiidae
varied carpet beetle (3)	*Anthrenus verbasci* (L.)
elm leaf beetle (3)	*Pyrrhalta luteola* (Muller)
booklice (3)	Psocoptera
black carpet beetle (3)	*Attagenus unicolor* (Brahm)
millipedes (3)	Diplopoda
darkling beetles (3)	Tenebrionidae
long-horned beetles (2)	Cerambycidae
cornfield ants (2)	*Lasius* spp.
pharaoh ants (2)	*Monomorium pharaonis* (L.)
dark-winged fungus gnats (2)	Sciaridae
sap beetles (2)	Nitidulidae
ground beetles (2)	Carabidae
earwigs (2)	*Forficula auricularia* L.
powderpost beetles (2)	Lyctidae
carpet beetle (2)	*Anthrenus scrophulariae* (L.)
click beetles (2)	Elateridae
assassin bugs (2)	Reduviidae
flea beetles (2)	Alticinae

Indian meal moth (2)	*Plodia interpunctella* (Hubner)
ants (2)	Formicidae
cockroach (1)	Blattodea
false powder post beetles (1)	Bostrichidae
humpbacked flies (1)	Phoridae
stink bugs (1)	Pentatomatidae
minute brown scavenger beetle (1)	Lathridiidae
European chafer (1)	*Rhizotrogus majalis* (Razoumowsky)
house centipede (1)	*Scutigera coleoptrata* (L.)
acrobat ants (1)	*Crematogaster sp.*
springtails (1)	Collembola
cave cricket (1)	Rhaphidophorinae
hermit flower beetle (1)	*Osmoderma eremicola* Koch
merchant grain beetle (1)	*Oryzaephilus mercator* (Fauvel)
wood wasps (1)	Xiphydriidae
caddisflies (1)	Trichoptera
mayflies (1)	Ephemeroptera
brown lacewings (1)	Hemerobiidae
pomace flies (1)	Drosophilidae
strawberry root weevil (1)	*Otiorhynchus ovatus* (L.)
brownish-grey fishing spider (1)	*Dolomedes tenebrosus* Hentz
silken fungus beetle (1)	Cryptophagidae
brownbanded cockroach (1)	*Supella longipalpa* (F.)
mayflies (1)	Baetidae
snout moth (1)	Pyralidae
carpenter bee (1)	*Xylocopa sp.*
a mud dauber wasp (1)	*Chalybion californicum*

Reports of the leaf-footed bug, *Leptoglossus occidentalis* Heidemann, are increasing. Specimens were submitted from Guelph, Bolton, Waterloo, Orangeville and Mississauga.

A sphecid wasp, *Trypoxylon backi*, was found making nests in holes in antique farm equipment in Milton, Ontario, around the end of June. The holes in the equipment had been made by previous infestations of powderpost beetles.

A false powderpost beetle, subfamily Psoinae, emerged from a wooden sculpture imported from South Africa. The insect was collected on Nov. 4 in Haliburton, Ontario.

Telephone requests for information on the following pests of households were received. Pests are listed in descending order of frequency.

carpenter ants (31)	*Camponotus spp.*
ants (23)	Formicidae
spiders (19)	Araneida
cockroaches (13)	Blattodea
earwigs (12)	*Forficula auricularia* L.
cluster flies (11)	*Pollenia rudis* (F.)
powderpost beetles (11)	---
fruit flies (9)	Drosophilidae
larder beetles (6)	*Dermestes lardarius* L.
carpenter bees (6)	*Xylocopa spp.*
carpet beetles (5)	Dermestidae
silverfish (5)	Lepismatidae
centipedes (4)	Chilopoda
black widow spider (3)	*Latrodectus mactans* (F.)
termites (3)	*Reticulitermes flavipes* (Kollar)

crickets (3)	Gryllinae
clothes moths (2)	Tineidae
pseudoscorpions (2)	Pseudoscorpiones
sap beetles (2)	Nitidulidae
mealworms (2)	Tenebrionidae
booklice (2)	Psocoptera
boxelder bugs (2)	*Boisea trivittata* (Say)
dark-winged fungus gnats (1)	Sciaridae
halictid bees (1)	Halictidae
millipedes (1)	Diplopoda
assassin bugs (1)	Reduviidae
springtails (1)	Collembola

Saskatchewan

L. Harris

The major arthropods associated with dwellings in 1991 were:

Ants	Formicidae spp.
Bed bug	*Cimex lectularius*
Black carpet beetle	*Attagenus megatoma*
Black field cricket	*Acheta assimilis*
Boxelder bug	*Leptocoris trivittatus*
Camel cricket	*Ceuthophilus* sp.
Clover mite	*Bryobia praetiosa*
Confused flour beetle	*Tribolium confusum*
Human flea	*Pulex irritans*
Indian meal moth	*Plodia interpunctella*
Larder beetle	*Dermestes lardarius*
Meal moth	*Pyralis farinalis*
Mediterranean flour moth	*Anagasta kuehniella*
Merchant grain beetle	*Oryzaephilus mercator*
Pseudoscorpion	*Dactylochelifer copiosus*
Rice weevil	*Sitophilus oryzae*
Strawberry root weevil	*Brachyrhinus ovatis*
Varied carpet beetle	*Anthrenus verbasci*
Wasps	*Vespula* spp.
Yellow mealworm	*Tenebrio molitor*

British Columbia/Colombie-Britannique

R. Duncan

Anobiidae	powder post beetles
Anthrenus verbasci (L.)	varied carpet beetle
Camponotus spp.	carpenter ants
Formica spp.	ants
Lasius pallitarsus (Provancher)	an ant
Reticulitermes hesperus Banks	western subterranean termite
Vespula pennsylvanica (Saussure)	yellowjacket wasp
Zootermopsis angusticollis (Hagen)	Pacific dampwood termite
Blattella germanica (L.)	German cockroach

Buprestis aurulenta L.	golden buprestid
Dysdera crocata Koch	a spider
Lyctus spp.	powder post beetles
Osmia lignaria propinqua Cresson	a leafcutter bee
Pollenia rudis (Fab.)	a blow fly
Ceuthophilus sp.	a camel cricket
Cyphon brevicollis (Leconte)	a marsh beetle
Hoffmanophila pseudospretella (Stainton)	brown house moth
Latrodectus mactans (F.)	black widow spider
Lepisma saccharina L.	silverfish
Leptoglossus occidentalis Heid.	a seed bug
Leptura sp.	a woodborer
Monochamus scutellatus (Say)	Oregon fir sawyer
Polistes fuscatus aurifer Sauss.	golden paper wasp
Ptinus ocellus Brown	Australian spider beetle
Sceliphron caementarium (Drury)	a mud dauber wasp
Steatoda grossa (Koch)	a spider
Tetratoma concolor Leconte	false darkling beetle
Tetropium parvulum Casey	a wood borer
Trachyphloeus bifoveolatus Beck	a weevil
Trogoxylon prostomoides Gorham	a powder post beetle
Xylotrechus longitarsus Casey	a wood borer

INSECT AND RELATED PESTS OF STORED PRODUCTS
LES RAVAGEURS DES PRODUITS ENTREPOSES

Nova Scotia/Nouvelle-Ecosse

L. Crozier

The following is a list of pests of stored products which were received for identification during the last year.

Merchant grain beetle (4)	*Oryzaephilus mercator* (Fauvel)
Sawtoothed grain beetle (1)	*Oryzaephilus surinamensis* (L.)
Indian meal moth (5)	*Plodia interpunctella* (Hubner)
Drugstore beetle (3)	*Stegobium paniceum* (L.)
Psocids (3)	Pscoptera (undetermined)
Acute-angled fungus beetle (2)	*Cryptophagus acutangulus* Gyll.
Shiny spider beetle (1)	*Mezium affine* Boieldieu
Whitemarked spider beetle (1)	*Ptinus fur* (L.)
Pecan weevil (1)	*Curculio caryae* (Horn)

Ontario

K.L. Nystrom & P.D. Syme

The most commonly reported pests in this category in the Sault Ste. Marie area were the larder beetle, *Dermestes lardarius* L., and the Indian meal moth, *Plodia interpunctella* (Hubner). The larder beetle accounted for 18 of the calls while the Indian meal moth accounted for 7 of all reports in this category. Both the merchant grain beetle, *Oryzaephilus mercator* (Fauvel), and the yellow mealworm, *Tenebrio molitor* L., had 6 calls each. The cigarette beetle, *Lasioderma serricorne* (Fab.), and the drugstore beetle, *Stegobium paniceum* (L), were reported 2 times each.

K.E. Romel & M.D. Dykstra

The following pests of stored products were submitted for identification. They are listed in descending order of frequency.

Indian meal moths (10)	*Plodia interpunctella* (Hubner)
sawtoothed grain beetle (3)	*Oryzaephilus surinamensis* (L.)
cigarette beetle (3)	*Lasioderma serricorne* (F.)
booklice (3)	Psocoptera
dermestid beetles	Dermestidae
dermestid beetles (2)	*Trogoderma spp.*
Mediterranean flour moth (2)	*Anagasta kuehniella* (Zeller)
granary weevil (2)	*Sitophilus granarius* (L.)
merchant grain beetle (1)	*Oryzaephilus mercator* (Fauvel)
confused flour beetle (1)	*Tribolium confusum* Jacquelin du Val
rice weevil (1)	*Sitophilus oryzae* (L.)
large flour beetle (1)	*Tribolium destructor* (Utten.)
common grain mite (1)	*Acarus siro* L.
vetch bruchid (1)	*Bruchis brachialis* Fahraeus
ant-like flower beetle (1)	Anthicidae

Consumer complaints:

A rove beetle (species unidentified) was found in a cheeseburger.

A metallic wood-boring beetle (species unidentified) was found in a carton of milk.

A live noctuid caterpillar was found in an opened bag of milk.

A German cockroach, *Blattella germanica* (L.), was found in a french fry bag.

Humpbacked flies (Phoridae) were found in a whey tank at a creamery.

Telephone enquiries included the Indian meal moth (4) and the granary weevil (1).

A. Pucat

The Indian meal moth, *Plodia interpunctella* (Hubner), the drugstore beetle, *Stegobium paniceum* (L.), and the merchant grain beetle, *Oryzaephilus mercator* (Fauvel) (from soybean meal), were reported from kitchens.

Manitoba

R.N. Sinha

A serious infestation of stored product insects has occurred in a 5-10 ft deep, 30,000 bu bulk of barley stored in a clean quonset barn, 200 ft long x 37 ft wide, on a cooperative farm at Argyle, Manitoba, during August - October 1991. Freshly harvested, well-matured grain, which was stored with 11.5-13.3 % moisture content, wet mass basis, and 30-32 °C in late August 1991, was infested with the following insect species (insects were collected by using both pitfall traps and torpedo probes): the the flat grain beetle, *Cryptolestes pusillus* (Schönherr); the rusty grain beetle, *Cryptolestes ferrugineus* (Stephens); the red flour beetle, *Tribolium castaneum* (Herbst); the foreign grain beetle, *Ahasverus advena* (Wolt); the hairy fungus beetle, *Typhaea stercorea* (L.); *Cartodere constrictus* (Gyllenhall); *Anthicus floralis* (L.); *Cephalonomia waterstoni* Gahan; and winged psocids. A few pockets of grain with many larvae of the rusty grain beetle were heating (maximum temperature, 37 °C). High grain harvest temperature and endemic pest population in the area seems to have caused this serious infestation of stored barley.

Stored Grain Insect Infestation in the Prairie Provinces (Autumn 1991)

R.N. Sinha

Infestation of stored cereals, primarily by the rusty grain beetle, *Cryptolestes ferrugineus* (Stephens), and often in association with the flat grain beetle, *Cryptolestes pusillus* (Schönherr), red flour beetle, *Tribolium castaneum* (Herbst), and American black flour beetle, *Tribolium audax* Halstead, has been reported from various parts of the Prairie Provinces during September-November 1991. Some areas with above-normal levels of infestation include: Argyle, Landmark, Niverville, Altona, Roland, Miami and Ile-des-Chênes in Manitoba; Claydon, Frontier, Shaunavan and Watrous in Saskatchewan; Lethbridge and Medicine Hat in Alberta. The most severe infestation by the rusty grain beetle seems to be restricted to the southeastern corner of Alberta and southwestern corner of Saskatchewan. In one elevator in Claydon, SK, 120 of the 132 farmer clients brought in grain that was infested with beetles.

In November 1991, there was a 200 % increase, over the same period last year, in the number of boxcars carrying export grain that contained rusty grain beetles originating from different points on the

prairies. It appears that storing of unusually warm and dry grain during August and September of this year, particularly in granaries without ventilation systems, and storage of grain in open piles outdoors are partially responsible for the high initial infestation and multiplication of these beetles. Data from suction traps outdoors indicate that these beetles have been actively flying this summer and autumn.

We have alerted the provincial entomologists, several extension agrologists and agricultural representatives in Saskatchewan, Manitoba and Alberta, and selected elevator managers in Saskatchewan and provided specific information on preventive measures to be taken to alleviate a potential outbreak of stored grain insects. This advice includes the use of pitfall traps, CO_2 - early infestation warning devices, turning of grain, cooling by aeration. We have also suggested that phosphine fumigant should be used to control insects in heavily infested grain only in the Spring when the grain warms up and insecticides are effective.

British Columbia/Colombie-Britannique

R. Duncan

There were only five collections of stored products pests submitted for identification in 1991. Four contained the drugstore beetle, *Stegobium paniceum* (L.), and one the Indian meal moth, *Plodia interpunctella* (Hubner).

INSECT AND RELATED PESTS OF MAN AND ANIMALS
LES RAVAGEURS DE L'HOMME ET DES ANIMAUX

Nova Scotia/Nouvelle-Ecosse

L. Crozier

A number of ticks were received for identification. They included seven specimens of *Ixodes cookei* Packard, two of them from a fisher and five from humans; one *Ixodes dammini* Spielman et al. from a cat; and four *Dermacentor variabilis* (Say), two from dogs, one from a cat and one from a human.

Erythraeid mites, *Balaustium* sp., were reported from a local laboratory. Some staff received bites from the mites.

Two samples of bed bugs, *Cimex lectularius* L., were received.

The deer fly, *Chrysops fuliginosus* Wiedemann, caused concern at a community recreation area near Wedgeport, Nova Scotia.

Several calls were received concerning mosquito problems. The saltmarsh mosquito, *Aedes sollicitans* (Walker), is most likely the major species involved.

Samples of fleas received included the cat flea, *Ctenocephalides felis*, and the European chicken flea, *Ceratophyllus gallinae* (Schrank). The latter was collected from a deer.

One warble fly, *Hypoderma* sp., was received.

Rattailed maggots, *Eristalis tenax* (L.), were reported from a dairy barn.

Ontario

K.L. Nystrom & P.D. Syme

In the Sault Ste. Marie area, cat fleas, *Ctenocephalides felis* (Bouché), and dog fleas, *Ctenocephalides canis* (Curtis), were responsible for one call each. Unidentified fleas were again troublesome pests in this category, with a total of 2 complaints, one of which was involved with fleas found on a human. Black fly and mosquito control concerned 2 people this year. Lyme disease was a concern for travellers again this year and hence inquiries concerning ticks and their association with the disease. The American dog tick, *Dermacentor variabilis* (Say), received 3 inquiries. One of the callers found ticks on their dog. The other two callers found ticks on their children and one of these callers was from Michigan. The tick *Ixodes cookei* Packard concerned 5 callers. Three of these callers were concerned with ticks found on humans and the other two callers had found ticks on dogs. Two callers were also concerned with ticks in general and about Lyme disease. One of these callers was from Bruce Mines. As in the past, people bitten by ticks were advised to see their doctor.

Other calls in this category included 3 calls concerning chicken mites (Acari) infesting buildings and subsequently biting people and 2 calls concening bed bugs, *Cimex lectularius* (L.).

K.E. Romel & M.D. Dykstra

Seven specimens of groundhog ticks, *Ixodes cookei* Packard, were submitted for identification. These ticks were taken from human hosts. Only one specimen of the American dog tick, *Dermacentor variabilis* (Say), taken from a human host, was received.

Chicken mites, *Dermanyssus gallinae* (DeGeer), were submitted on three occasions. Two of the complaints were from homeowners who found abandoned bird nests on their property.

One sample each of cat fleas, *Ctenocephalides felis* (Bouché), mosquitoes *Aedes sp.*, and sweat bees (Halictidae) were also received.

A yellow garden spider, *Argiope aurantia* Lucas, bit a human, causing an allergic reaction in the patient.

A bot or warble fly adult (Oestridae) was submitted from Winchester, Ontario, on July 23.

Pests found in barns included a German cockroach, *Blattella germanica* (L.), in a turkey barn, a giant waterbug, *Lethocerus americanus* (Leidy), in an egghouse, a pseudoscorpion in a turkey barn and lesser mealworms, *Alphitobius diaperinus* (Panzer), in the insulation of pig and chicken barns (three reports).

Three specimens of bald-faced hornets, *Vespula maculata*, were submitted.

Telephone enquiries were received regarding the following pests of man and animals. Pests are listed in decreasing order of frequency.

wasps/bees/hornets (93)	Hymenoptera
mosquitoes (9)	Culicidae
fleas (9)	*Ctenocephalides spp.*
horse and deer flies (7)	Tabanidae
rat-tailed maggots (3)	*Eristalis tenax* (L.)
biting midges (1)	Ceratopogonidae
black flies (1)	Simuliidae

British Columbia/Colombie-Britannique

R. Duncan

Six collections of pests of man and animals were submitted for identification in 1991. Three collections were of the deer tick, *Ixodes pacificus* Cooley & Kohls, and the remaining three were: the bedbug, *Cimex lectularius* L.; the head louse, *Pediculus humanus capitus* DeGeer; and the Rocky Mountain wood tick, *Dermacentor andersoni* Stiles.

BENEFICIAL INSECTS
INSECTES UTILES

Ontario

K.L. Nystrom & P.D. Syme

In this category, ground beetles (Carabidae), were the most popular insect of which five calls were received this year. Three callers were concerned about them being in a building of which one of these three had claimed the beetle had bit a child. Furthermore, another caller was concerned about finding them in the garden, and the other call was out of curiosity. Four calls were reported, out of curiosity, concerning pseudoscorpions. Calls concerning the large flesh fly, also called the friendly fly, *Arachnidomyia* (=*Sarcophaga*) *aldrichi* (Park), a parasite of the forest tent caterpillar, were received three times this year. Callers reported this fly as a nuisance and wanted control. Lady beetles (Coccinellidae), tallied two calls from the Sault Ste. Marie and Algoma Districts. Centipedes (unidentified), a parasitic wasp (Braconidae), a soldier beetle (Cantharidae), a lady beetle (Coccinellidae), and a parasite identified as *Megarhyssa* sp. (Ichneumonidae), were reported once.

K.E. Romel & M.D. Dykstra

A two-spotted stink bug, *Perillus bioculatus*, was submitted from Haley Station, Ontario, on August 2. This insect is a predator of the Colorado potato beetle.

Mud nests from a mud dauber wasp, *Eumenes sp.*, were found on a lilac bush in a home garden in Toronto, Ontario, on Aug. 2.

An ichneumonid parasitoid of horntails was submitted from Alma, Ontario, on August 21. The specimen was identified to the genus *Megarhyssa*.

Cornfield ants, *Lasius sp.*, which were being raised for a school project were submitted for identification.

One telephone request regarding the rearing of lady beetles (Coccinellidae) was received.

Three requests for information on giant waterbugs, *Lethocerus americanus* (Leidy), were also received.

INDEX

Acantholyda erythrocephala 31
Acari 45
Acarus siro 42
Aceria chondriphora 31
Aceria fraxiniflora 32
Aceria parapopuli 34
achemon sphinx 31
Acheta assimilis 40
Acrobasis betulella 30
Acrobasis vaccinii 28
acrobat ants 39
Acronicta superans 26
Actebia fennica 11
Actias luna 31
Aculops lycopersici 16
Aculus schlechtendali 24
Acute-angled fungus beetle 42
Acyrthosiphon caraganae 34
Adelges abietis 32
Adelges cooleyi 34, 35
Adelges lariciatus 31, 32
Adelges piceae 35
Adelges tsugae 35
Aedes sollicitans 45
Aedes sp. 46
Agrilus anxius 30-35
Agriotes lineatus 35
Agrotis orthogonia 3
Ahasverus advena 43
alder flea beetle 30
alder woolly sawfly 36
Aleyrodidae 16, 33, 35
Alphitobius diaperinus 46
Alsophila pometaria 30, 34, 35
Altica ambiens 30
Altica sylvia 27
Alticinae 38
Alypia octomaculata 34
American black flour beetle 43, 45
Anagasta kuehniella 40, 42
Andricus ignotus 34
Anisota finlaysoni 32
Anobiidae 38, 40
ant-like flower beetle 42
Antheraea polyphemus polyphemus 34
Anthicidae 42
Anthicus floralis 43
Anthonomus signatus 27
Anthrenus scrophulariae 38
Anthrenus verbasci 38, 40
ants 11, 29, 37-40, 47
Aoetidae 29
aphids 1, 3, 4, 11, 21, 31, 32, 34, 35
Aphis citricola 23
Aphis pomi 21, 23
Aphis viburniphilia 30
Aphodius pinguillus 13
Aphrophora cribrata 31
apple ermine moth 35
apple maggot 21, 24, 25
apple-and-thorn skeletonizer 24, 25
Arachnidomyia (=Sarcophaga) aldrichi 47
Aranea trifolium 38
Araneida 39
Araneus diadematus 37
Araneus trifolium 37
arborvitae leafminer 32
Archips argyrospilus 25, 31, 35
Archips cerasivorana 32
Archips rosana 35
Arctiidae 19
Arge pectoralis 30
Argiope aurantia 37, 46
Argyresthia cupressella 35
Argyresthia thuiella 32
Argyrotaenia citrana 35
army cutworm 1, 11
armyworm 1, 11, 17
Aroga trialbamaculella 27
Artogeia rapae 17, 18, 29
Ash bark beetles 34, 35
ash bladdergall mite 31
Ash borer 34, 35
ash flower gall mite 32
ash plant bugs 34
Aspen leaf beetle 34
assassin bug 38, 40
aster cutworm 29
Attagenus megatoma 37, 40
Attagenus unicolor 37, 38
Australian spider beetle 41
Baetidae 39
bagworm 24
Balaustium sp. 45
balsam twig aphid 36
balsam woolly adelgid 35
Bark beetles 33, 34, 38
Barypeithes pellucidus 35
Bed bug 40, 45, 46
Bee flies 29
bees 37, 39, 40, 46
belle-dame 11, 15
Besbicus mirabilis 35
Bibionidae 25
big poplar sphinx 31
birch aphid 36

birch catkin bug 32, 33
birch leafminer 31-33
birch sawfly 30
bird cherry-oat aphid 1
Biston cognataria 35
black army cutworm 11
Black carpenter ants 29, 37
black carpet beetle 37, 38, 40
black cherry aphid 36
Black field cricket 40
Black fly 45
black vine weevil 16, 30, 35, 37, 38
black widow spider 37, 39, 41
Black willow aphid 34
Blackheaded fireworm 28
blackvine weevil 27
Blattella germanica 37, 38, 40, 43, 46
Blattodea 39
Blissus canadensis 14
Blissus leucopterus 11, 12
Blissus leucopterus hirtus 11, 12
blow fly 38, 41
blueberry case beetle 27
blueberry flea beetle 27
blueberry leaf beetle 27
Blueberry leaftier 27
blueberry sawfly 27
blueberry spanworm 27
Bluegrass billbugs 11
Boisea trivittata 40
Bombyliidae 29
booklice 38, 40, 42
Bostrichidae 39
boxelder bugs 31, 40
Brachyrhinus ovatis 40
Braconidae 47
Brochymena sp. 33
bronze birch borer 30-35
Bronze cutworm 13
brown house moth 41
brown lacewings 39
brown recluse spider 38
brownbanded cockroach 39
brownish-grey fishing spider 39
Bruchis brachialis 42
brush-footed butterflies 29
Bryobia praetiosa 40
bud gall mite 32
Bumble flower beetle 20
Buprestis aurulenta 41
Byturus unicolor 28
cabbage butterfly 29
cabbage looper 17
cabbage maggot 19
caddisflies 39
California prionus 35
Caliroa cerasi 24-26, 31, 33, 35
Caliroa fasciata 32
Calliphoridae 38
Caloptilia syringella 31, 32
camel cricket 37, 40, 41
Camnula pellucida 4
Camponotus pennsylvanicus 29, 37
Camponotus spp. 37-40
Cankerworm 30, 34, 35
Cantharidae 47
Carabidae 38, 47
carpenter ants 29, 37-40
carpenter bees 39
carpet beetles 37, 39
carpocapse de la pomme 21-23
Cartodere constrictus 43
Carulaspis juniperi 32
cat fleas 45, 46
Caulocampus acericaulis 31-33
cave cricket 39
Ceanothus silk moth 36
Cecidiomyia sp. 32
cecropia moth 29, 33
Celeryworm 20
centipedes 39, 47
Cephalonomia waterstoni 43
Cephus cinctus 3
Cerambycidae 38
Ceratomia amyntor 29
Ceratomia undulosa 31, 35
Ceratophyllus gallinae 45
Ceratopogonidae 46
Cercopidae 31
Ceruraphis viburnicola 31
Ceuthophilus maculatus 37
Ceuthophilus sp. 40, 41
Chalybion californicum 39
Chalybion sp. 37
Chamaecyparis nootkatensis 35
cherry bark tortrix 36
chicken mites 45, 46
Chilopoda 39
chinch bug 11, 12
Chionaspis pinifoliae 34
Chironomidae 29
Chlorochroa ligata 35
Chloropidae 19
Choreutis pariana 24, 25
Choristoneura fumiferana 31, 33, 34
Choristoneura rosaceana 23, 31
Chrysobothris femorata 24
Chrysomela crotchi 34
Chrysomela scripta 34
Chrysops fuliginosus 45
Chrysoteuchia topiaria 28
cicada 12, 29, 36

cicada killer wasp 12
Cicadellidae 11, 16
cigarette beetle 42
Cimex lectularius 40, 45, 46
Cinara spp. 35
Cinara strobi 31
clearwinged grasshopper 4
click beetles 24, 38
clothes moths 38, 40
clover mites 12
clubionids 37
cluster flies 37, 39
Cnaemidophorus rhododactylus 29, 33
Cnephasia longana 36
Coccidae 31
Coccinellidae 47
Coccoidea 33
cockroach 37-40, 43, 46
codling moth 24, 25
Coleophora deauratella 13
Coleophora frischella 13
Coleophora malivorella 24
Coleophora trifolii 12
Coleotechnites piceaella 31
Collembola 39, 40
Colorado potato beetle 19, 20, 34, 47
columbine borer 31
common grain mite 42
conchuela 35
Confused flour beetle 40, 42
Conophthorus coniperda 31
Conotrachelus nenuphar 21, 22, 25, 26
Contarinia pseudotsugae 36
cooley spruce gall adelgid 34, 35
Cordyceps 11
corn earworm 10, 17, 20
corn leaf aphid 1
Cornfield ants 38, 47
cotoneaster webworm 36
cottonwood crown borer 34
cottonwood leaf beetle 34
cottony maple scale 31
Crambinae spp. 13
cranberry fruitworm 28
cranberry girdler 28
crane flies 11, 12, 20, 31
Crematogaster 39
Cremona cotoneastri 36
crickets 40
crimson erineum mite 32
Croesia curvalana 27
crucifer flea beetle 15, 20
Crymodes devastator 13
Cryptolestes ferrugineus 43
Cryptolestes pusillus 43
Cryptophagidae 39
Cryptophagus acutangulus 42
Cryptorhynchus lapathi 31, 35
Ctenocephalides canis 45
Ctenocephalides felis 45, 46
Ctenocephalides spp. 46
cuban laurel thrips 16
Cucullia convexipennis 29
Culicidae 46
Curculio caryae 21, 25, 26, 35, 42
cutworm 1, 3, 11, 13, 16, 17, 29
Cydia pomonella 23-25
Cynipidae 31
Cyphon brevicollis 41
cypress gall midge 35
cypress tip moth 35
Dactylochelifer copiosus 40
daddy long legs 38
Daktulosphaira vitifoliae 28
Danaus plexipus 29
Dark-winged fungus gnats 12, 29, 38, 40
darkling beetles 11, 38, 41
Datana ministra 35
deer fly 45
deer tick 46
Delia antigua 19
Delia platura 18
Delia radicum 18, 19
Delia sp. 19
Dendroctonus pseudotsugae 36
Dermacentor andersoni 46
Dermacentor variabilis 45
Dermanyssus gallinae 46
Dermestes lardarius 37-40, 42
Dermestes signatus 37
Dermestidae 38, 39, 42
Deroceras reticulatum 17
Diabrotica virgifera virgifera 10
Diacrisia virginica 36
Diamondback moth 17
Diaphnocoris chlorionis 32
Dichomeris marginella 36
Diplopoda 38, 40
Diprion similis 31, 32
Disholcaspis eldoradensis 36
Ditula angustiorana 36
Diuraphis noxia 3
Dolomedes scriptus 37
Dolomedes sp. 38
Dolomedes tenebrosus 39
Dolomedes vittatus 37
Douglas-fir beetle 36
Douglas-fir needle midge 36
Douglas-fir tussock moth 36
Douglas-fir twig beetle 36
Drapanophis sp. 31
Drosophila sp. 29, 38

Drosophilidae 39
Drugstore beetle 42-44
Dryocosmus quercuspalustris 21, 36
Dysdera crocata 41
earwigs 19, 38, 39
eastern spruce gall adelgid 32
Eight-spotted forester 34
Elateridae 24, 38
Elatobium abietinum 35
elm leaf beetle 32, 33, 38
elm leafminer 31
elm sphinx moth 29
Enarmonia formosana 36
English grain aphid 1
Ephemeroptera 39
Ephydridae 16, 29
Eriocampa ovata 31, 36
Eriophyes betulae 32
Eriophyes parapopuli 35
Eriophyes regulus 32
Eriophyes spp. 31, 32
eriophyid mites 30, 32
Eriosoma lanigerum 23
Eristalis tenax 29, 45, 46
Erythraeid mites 45
Erythroneura sp. 31
Euceraphis sp. 36
Euclea delphinii 33
Eumenes sp. 47
Eumorpha achemonpale 31, 33
euonymus scale 31-33
Euphoria inda 20
European corn borer .....
..... 10-13, 19-21, 28, 30-32, 36, 37, 39, 45
Euxoa ochrogaster 3, 17
fall armyworm 17
fall cankerworm 30, 35
fall webworm 28, 30, 31, 36
false darkling beetle 41
false powder post beetles 39
Fenusa pusilla 31-33
Fenusa ulmi 31
Ficus retusa 16
flat grain beetle 43
flatheaded appletree borer 24
Flea beetles 11, 15, 38
fleas 38, 45, 46
Fletcher scale 32
foreign grain beetle 43
forest tent caterpillar 31, 35, 47
Forficula auricularia 19, 36-39
Formica spp. 40
formicidae 39, 40
friendly fly 47
Frit flies 19
Fruit flies 38, 39
fruittree leafroller 25, 31, 35
fungus gnats 12, 29, 37, 38, 40
furniture beetles 38
Galleria mellonella 29
German cockroach 38, 40, 43, 46
giant conifer aphids 35
Giant hornets 33
Giant waterbugs 29, 47
Glassy cutworm 13
golden buprestid 41
golden paper wasp 41
golden rod spider 31
Gossyparia spuria 31
Grammia blakei 13
granary weevil 42, 43
grape phylloxera 28
Grasshoppers 1, 3, 4, 7, 8, 27, 31, 34
great ash sphinx 31, 35
great golden digger wasp 11, 12
greater wax moth 29
green apple aphids 21
green bottle flies 29
greenhouse millipede 37
ground beetles 11, 38, 47
groundhog ticks 45
grubs 11, 12
Gryllinae 40
Gynaikothrips ficorum 16
gypsy moth 25, 31-33, 35
Haemopsis grandis 29
hagmoth caterpillar 33
hairy chinch bug 11, 12
hairy fungus beetle 43
halictid bees 40
Halictidae 40, 46
Halysidota tessellaris 31
Harmolita secale 3
harvestmen 38
head louse 46
Heliothis zea 10, 17, 18, 20
Hemerobiidae 39
hemlock woolly adelgid 35
hermit flower beetle 32, 39
Hessian fly 1, 3
Heterocampa guttivitta 25
Hoffmanophila pseudospretella 41
honeylocust plant bug 32
Honeysuckle aphid 35
honeysuckle witches-broom aphid 33
hoplocampe de la pomme 21, 22
hornets 33, 37, 46
Horsehair worms 12, 29
house centipede 39
house fly 37
House spiders 38
Human flea 40

humpbacked flies 29, 39, 43
Hyadaphis tataricae 35
Hyalophora cecropia 29, 33
Hyalophora euryalis 36
Hyaloscotes pithopoera 24
Hylesinus spp. 34
Hylobius radicis 31
Hylurgopinus rufipes 32
Hymenoptera 46
Hyphantria cunea 28, 30, 31, 36
Hypoderma sp. 45
Hypogastruridae 16
Ichneumonidae 47
Imported cabbageworm 17, 20, 32, 36, 39
Indian meal moth 39, 40, 42-44
Isopoda 38
Itame andersoni orientis 27
Itame argillacearia 27
Itame brunneata 27
Ixodes cookei 45
Ixodes dammini 45
Ixodes pacificus 46
Japanese beetle 33
jumping gall wasp 35
jumping spider 37
June beetle 12, 36
juniper scale 32
juniper webworm 36
Kleidocerys resedae geminatus 32, 33
Lady beetles 47
larch sawfly 34
larder beetle 37-40, 42
large flesh fly 47
large flour beetle 42
Lasioderma serricorne 42
Lasius pallitarsus 40
Lasius sp. 47
Lathridiidae 39
Latrodectus mactans 39, 41
Latrodectus sp. 37
leaf hoppers 31
leaf notching weevil 36
leaf petiole gall 32
leaf-footed bug 38, 39
leafhopper 16, 32
lecanium scale 28, 31, 32, 36
Lecanopsis formicarum 11
leeches 29
Lepisma saccharina 38, 41
Lepismatidae 39
Leptinotarsa decemlineata 19, 20
Leptocoris trivittatus 40
Leptoglossus occidentalis 38, 39, 41
Leptura sp. 41
lesser grain borer 3
lesser mealworms 46
Lethocerus americanus 29, 46, 47
lilac leafminer 31, 32
Lilioceris lilii 30, 32
lily leaf beetle 32
Listronotus oregonensis 17
long-horned beetles 38
Lonicera sp. 33
Lophocampa argentata 35
Lophocampa maculata agassizi 36
Loxosceles reclusa 38
Lucilia sericata 29
luna moth 31
Lycosidae 38
Lyctidae 38
Lyctus spp. 37, 41
Lygus lineolaris 12, 17, 22, 27
Lygus sp. 31
Lymantria dispar 25, 31-33
Lyme disease 45
Lytta spp. 33, 34
Macropsis fumipennis 32
Macrosiphum avenae 1
magnolia scale 32
Malacosoma americanum 33
Malacosoma c. lutescens 34, 35
Malacosoma c. pluviale 35
Malacosoma disstria 31, 33, 35
Malacosoma spp. 33
Manduca quinquemaculata 19
maple bladdergall mite 31, 32
maple borer 36
maple leafroller 31
maple petiole borer 31-33
maple spindlegall mite 31
maple webworm 31
march flies 25
marsh beetle 41
mayflies 39
Meal moth 37, 39, 40, 42-44
mealworms 40, 46
Mecas inornata 31
Mediterranean flour moth 40, 42
Melanoplus packardii 4
Melanoplus sanguinipes 4
Melanoplus spp. 34
merchant grain beetle 39, 40, 42, 43
Mermis subnigrescens 12, 29
Meromyza americana 3
Mezium affine 42
midges 29, 46
migratory grasshopper 4
Millipedes 11, 20, 28, 37, 38, 40
Mindarus abietinus 36
minute brown scavenger beetle 39
Misumena vatia 31
mites 12, 14, 29-33, 45, 46

monarch butterfly 29
Monarthrum scutellare 36
Monochamus scutellatus 29, 41
Monochamus sp. 32
Mordvilkoja vagabunda 32
mosquitoes 45, 46
mouche de la carotte 17
mouche de la pomme 21-23
mouche du chou 18
mountain ash sawfly 31, 46
mourningcloak butterfly 35, 36
mud dauber wasp 37, 39, 41, 47
Musca domestica 38
Mycetophilidae 37
Myzocallis sp. 36
Myzus cerasi 36
Nacerdes melanura 37
Nalepella tsugifoliae 34
nematodes 12, 29
Nematomorpha 12
Nematus ribesii 36
Neoceruraphis viburnicola 28
Neochlamisus cribripennis 27
Neoclytus acuminatus 35
Neodiprion abietella 33
Neodiprion sertifer 30, 31
Neolecanium cornuparvum 32
Nephelodes emmedonia 13
Neuroterus saltatorius 35
Nitidulidae 38, 40
noctuelle du fruit vert 21, 22
noctuid 43
Noctuidae 16
northern cedar bark beetle 32
notodontid moth 36
Nymphalidae 29
Nymphalis antiopa 34-36
oak ambrosia beetle 36
oak leaf phylloxeran 35
oak slug sawfly 32
obliquebanded leafroller 31
ocellate gall midge 31
Oestridae 46
Olethreutes tiliana 28
Oligonychus ununguis 31, 32, 34, 36
omnivorous leaf tier 36
onion maggot 19
Onion thrips 17
Operophtera brumata 28, 30, 35
orange spruce needleminer 31
orange tortrix 35
orb weaver spiders 38
Oregon fir sawyer 41
Orgyia antiqua badia 36
Orgyia leucostigma 25, 31
Orgyia leucostigma intermedia 31
Orgyia pseudotsugata 36
Orthosia hibisci 22, 31
Oryzaephilus mercator 39, 40, 42, 43
Oryzaephilus surinamensis 42
Osmia lignaria propinqua 41
Osmoderma eremicola 32, 39
Ostrinia nubilalis 10, 18-20
Otiorhynchus ovatus 28, 36-39
Otiorhynchus rugifrons 37
Otiorhynchus singularis 36, 37
Otiorhynchus sulcatus ... 16, 27, 30, 35, 37, 38
owlet moth 26
Oxidus gracilis 37
Pachysphinx modesta 31
Pacific dampwood termite 40
Pacific willow leaf beetle 36
Packard's grasshopper 4
painted lady 11, 15, 17
pale green weevil 31
pale western cutworm 1, 3
Paleacrita vernata 34, 35
Panonychus ulmi 21, 24
Papaipema lysimacheae 31
Papilio glaucus canadensis 29
Papilio polyxenes asterius 20
Parcoblatta spp. 38
Parthenolecanium corni 28, 31, 36
Parthenolecanium fletcheri 32
pear leaf blister mite 36
Pear slug 25, 35
pearslug sawfly 24, 26, 31, 33
Pecan weevil 42
Pediculus humanus capitus 46
Pegomya rubivora 36
Pemphigus populicaulis 31, 32
Pemphigus populitransversus 31, 36
Pemphigus sp. 31
Pentatomatidae 39
pepper & salt moth 35
Perillus bioculatus 47
Periphyllus lyropictus 35
Periplaneta sp. 37
Phalangida 38
pharaoh ants 38
Phenacaspis pinifoliae 35
Phiddipus johnsoni 37
Phloeosinus canadensis 32
Phloeosinus punctatus 36
Phobetron pithecium 33
Phoeosinus sequoiae 35
Phoridae 29, 39, 43
Phyllonorycter blancardella 21, 23-25
Phyllophaga 11, 12, 18
Phyllophaga anxia 18
Phyllotreta cruciferae 15, 20
Phylloxera sp. nr. glabra 35

Phymatodes lecontei 36
Physokermes hemicryphus 36
Phytoptus pyri 36
Pieris rapae 20
Pikonema alaskensis 31, 34, 36
pine bark adelgid 31
pine needle scale 34, 35
pine spittlebug 31
pine tortoise scale 32
pine web-spinning sawfly 31
Pineus strobi 31
pique-bouton du pommier 22
Pissodes strobi 31-33
pistol case-bearer 24
pitch mass borer 32, 33
Pityophthorus orarius 36
Plagiodera versicolora 32
planthoppers 11, 31
Platarctia parthenos 36
Platynota idaeualis 23
Platypedia areolata 36
Plecoptera 29
Plodia interpunctella 39, 40, 42-44
plum curculio 21, 25, 26
plume moth 29, 33
Plutella xylostella 17, 18
Podosesia syringae 34
Polistes fuscatus aurifer 41
Pollenia rudis 37, 39, 41
Polydrusus impressifrons 31
polyphemus moth 31, 34
Polyphylla crinita 36
pomace flies 39
Popillia japonica 33
poplar & willow borer 35
poplar budgall mite 34, 35
poplar gall borer 31
poplar leaf petiolegall aphid 31, 32
poplar petiolegall aphid 31, 36
poplar vagabond gall aphid 32
poplar-and-willow borer 31
Porthetia dispar 35
powder post beetles 37-41
prairie tent caterpillar 34, 35
Prionus californicus 35
Pristiphora erichsonii 34
Pristiphora geniculata 31
Pristophora sp. 27
Pscoptera 42
Pseudaletia unipuncta 1, 11
Pseudoplusia includens 11
Pseudoscorpiones 38, 40
pseudoscorpions 37, 38, 40, 46, 47
Psila rosae 17
Psocids 42, 43
Psocoptera 38, 40, 42
Psoinae 39
Pterocomma smithiae 34
Ptinus fur 42
Ptinus ocellus 41
puceron vert du pommier 23
pucerons 21, 23
Pulex irritans 40
Pulvinaria innumerabilis 31
punaise terne 21, 22
Pyralidae 39
Pyralis farinalis 37, 40
Pyrrhalta decora carbo 36
Pyrrhalta luteola 32, 33, 38
Pyrrhalta vaccinii 27
Pyrrhalta viburni 33
Pyrrhia exprimens 31
raspberry cane maggot 36
raspberry fruitworm 28
Rattailed maggots 29, 45
red flour beetle 43
red sunflower seed weevil 15
redbacked cutworm 1, 3, 17
Redheaded ash borer 35
Redhumped caterpillar 30, 35
redstriped fireworm 27
Reduviidae 38, 40
redwood bark beetle 35
Reticulitermes hesperus 40
Reticulitermes flavipes 39
Rhabdophaga salicisbrassicoides 31
Rhagoletis pomonella 21, 23-25
Rhaphidophorinae 39
Rhinotermitidae 37
Rhizotrogus majalis 11, 39
Rhobopta naevana 28
Rhopalosiphum maidis 1
Rhopalosiphum padi 1
Rhyacionia buoliana 36
Rhynchites bicolor 35
Rhyzopertha dominica 3
Rice weevil 40, 42
Rocky Mountain wood tick 46
root collar weevil 31
Root maggots 29
root weevils 37
Rose curculio 35
roseslug 32
rosy apple aphid 21, 36
round-headed borer 32
roundheaded appletree borer 30
rove beetle 43
Russian wheat aphid 1, 3, 4
rustic borer 38
rusty grain beetle 43
rusty tussock moth 36
rye jointworm 1, 3

salticid ... 37
saltmarsh mosquito ... 45
San jose scale ... 31
sap beetles ... 38, 40
Saperda candida ... 30
sawflies ... 32, 34
Sawtoothed grain beetle ... 42
sawyer beetles/longhorned beetles ... 38
scale insects ... 33
Scarabaeidae ... 12, 13, 20
Sceliphron caementarium ... 41
Schizura concinna ... 30, 35, 36
Sciaridae ... 12, 29, 38, 40
Scolytidae ... 33, 38
Scolytus multistriatus ... 25, 32, 36
scorpions ... 29
Scutigera coleoptrata ... 39
seed bug ... 41
sequoia pitch moth ... 36
Serica tristis ... 27
Sesia tibialis ... 34
shamrock orb weaver ... 38
shiny spider beetle ... 42
Shore flies ... 16, 29
short-horned oakworms ... 32
shothole borer ... 25, 36
silken fungus beetle ... 39
silver-spotted tiger moth ... 35
Silverfish ... 38, 39, 41
Simuliidae ... 46
Sitodiplosis mosellana ... 1, 3
Sitophilus granarius ... 42
Sitophilus oryzae ... 40, 42
slugs ... 17, 19, 29
small leaf chafer ... 27
Smerinthus cerisyi ... 36
Smicronyx fulvus ... 15
snout moth ... 39
snow fleas ... 38
snowball aphid ... 28, 31
sod webworm ... 12, 13
soldier beetle ... 47
sowbugs ... 37, 38
soybean looper ... 11
spanworms ... 27
Sparganothis acerivorana ... 31
speckled green fruitworm ... 31, 35
Sphecidae ... 37
Sphecinae ... 37
Sphecius speciosus ... 12
Sphenophorus parvulus ... 11
Sphex ichneumoneus ... 11
Sphinx chersis ... 31, 35
Sphinx drupiferarum ... 26
sphinx moth ... 29, 33
spider ... 21, 27, 31, 32, 34, 36-39, 41, 42, 46
spider mites ... 32
spittlebugs ... 31
Spodoptera frugiperda ... 17, 18
Spotted tentiform leafminer ... 21, 24, 25
spotted tussock moth ... 36
Spring cankerworm ... 34, 35
Springtails ... 16, 29, 39, 40
Spruce aphid ... 35
spruce bud scale ... 36
spruce budworm ... 31, 33, 34
spruce gall adelgid ... 31, 32, 34, 35
spruce spider mite ... 31, 32, 34, 36
Steatoda grossa ... 41
Stegobium paniceum ... 42-44
Stephanopachys cribratus ... 31
stink bug ... 33, 39, 47
stone fly ... 29
Strauzia longipennis ... 19
strawberry root weevil ... 28, 36-40
strawberry weevil ... 27
Strophosoma melanogrammum ... 36
sunflower maggot ... 19
Supella longipalpa ... 39
sweat bees ... 46
sweetclover casebearer ... 12, 13
Synanthedon pini ... 32, 33
Synanthedon scitula ... 23
Synanthedon viburni ... 31
Synaphaeta guexi ... 36
Tabanidae ... 46
Taeniothrips inconsequens ... 23
tarnished plant bugs ... 12, 17, 27
tavelure ... 22, 24
Tenebrio molitor ... 40, 42
Tenebrionidae ... 38, 40
tent caterpillars ... 33
termites ... 37, 39
Tetralopha asperatella ... 31
Tetranychidae ... 32
Tetranychus urticae ... 21, 24, 27, 32
Thelaxes californica ... 35
thrips ... 1, 16, 17, 21, 23, 27
thrips du poirier ... 23
Thrips tabaci ... 17, 27
Tibicen pruinosa ... 29
ticks ... 45
tiger moth ... 35, 36
tiger swallowtail butterfly ... 29
Tineidae ... 38, 40
Tipula paludosa ... 11, 36
Tipula trivitata ... 12
Tipulidae ... 20, 31
tomato hornworm ... 19
tomato russet mite ... 16
tordeuse à bandes obliques ... 21-23
Tortricidae ... 31

Toumeyella parvicornis 32
Trachyphloeus bifoveolatus 41
Tribolium audax 43
Tribolium castaneum 43
Tribolium confusum 40, 42
Tribolium destructor 42
Trichoplusia ni 17
Trichoptera 39
Trisetacus chamaecypari 36
Trogoderma inclusum 37
Trogoderma spp. 42
Trogoxylon prostomoides 41
Tropidosteptes amoenus 34
Trypoxylon backi 39
turfgrass scale 11, 12
tussock moth 25, 31, 36
two-spotted stink bug 47
twospotted spider mite 21, 27, 32
Typhaea stercorea 43
Typhlocyba pomaria 23
uglynest caterpillar 32
Unaspis euonymi 32, 33
Vanessa cardui 11, 15, 17
variable caterpillar 24, 27, 31
varied carpet beetle 38, 40
Vasates aceris-crumena 31
Vasates quadripedes 31, 32
Venturia inaequalis 24
Vespa crabro germana 33
Vespidae 37
Vespula maculata 46
Vespula pennsylvanica 40
Vespula spp. 40
Vespula vulgaris 28
vetch bruchid 42
Vibernum leaf beetles 33
viburnum aphid 30, 31, 33
vinegar flies 29
warble fly 45, 46
warehouse beetle 37
wasps 37, 39, 40, 46
water spider 38
Waved sphinx 31, 35
webworm 12, 13, 28, 30, 31, 36
Western ash bark beetle 35
western cedar bark beetle 36
western corn rootworm 10
western subterranean termite 40
western tent caterpillar 35
wharf borer 37
wheat head armyworm 1
wheat midge 1, 3
wheat stem maggot 1, 3
wheat stem sawfly 1, 3
white flies 31, 35
White grub 13, 20
White grubs 11, 12
white pine cone beetle 31
white pine weevil 31-33
white spotted sawyer beetle 29
whiteflies 16, 33
Whitemarked spider beetle 42
whitemarked tussock moth 31
white pine aphid 31
wild-cherry sphinx 26
willow cabbagegall midge 31
willow sphinx 36
winter moth 28, 30, 35
Wireworms 12, 20
wolf spiders 38
wood roaches 38
wood wasps 39
woodborer 41
woolly oak gall 34
Xiphydria maculata 31
Xiphydriidae 39
Xyleborus dispar 36
Xylocopa sp. 39
Xylotrechus colonus 38
Xylotrechus longitarsus 41
yellow cypress mite 36
Yellow mealworm 40, 42
yellow woolly bear 36
yellowheaded spruce sawfly 31, 34, 36
Yellowjackets 28, 40
Yellownecked caterpillar 35
Yponomeuta cagnagella 31
Yponomeuta malinella 35
Zootermopsis angusticollis 40

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